

# Municipal Journal

## And Engineer

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SECTION OF STREET WIDENED BUT NOT YET REPAVED

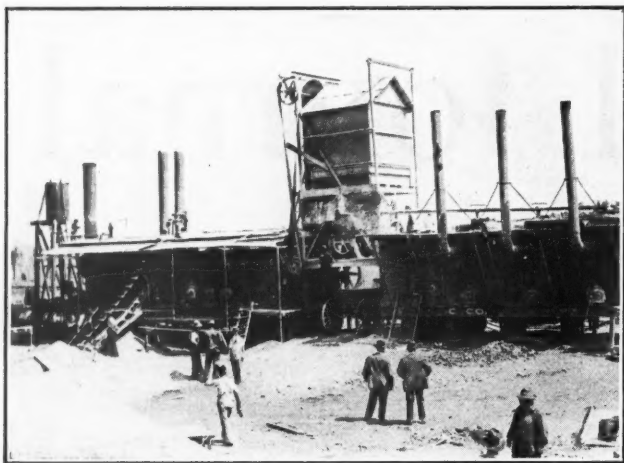
MICHIGAN Avenue to Jackson Boulevard on the north is under the control of the South Park Commissioners. This street is one of the most-traveled of any in the city, as it is the main thoroughfare from the "Loop" district to the South Side. Because it is a boulevard no heavy teaming is allowed on it, and for the most part autos and light vehicles form the traffic. However, from Park Place north to Jackson Boulevard there are at times a considerable number of heavily loaded wagons. This part of the street passes in front of the Annex and Auditorium Hotels and high-class stores, which are on the west side, Grant Park extending to the lake on the east, and is one of the show places of the city. The street was originally 55 feet wide and the traffic on it was very much congested, and the commissioners decided to make a roadway width of 75 feet and also build a promenade sidewalk on each side, that on the west side being 30 feet and that on the east 25 feet wide. The sidewalk work was described in our issue of November 28, 1908. The paving between Thirty-ninth and Fifty-fifth Streets was described in the August 25 number.

In the early part of the present year the South Park Commissioners let the contract for paving from Twelfth Street north

to the Metropolitan Paving & Construction Company, of Kansas City, through their Chicago manager, Mr. George D. Carr. The specifications called for 6-inch concrete base with a 2-inch topping of asphaltic concrete, and the contract price was \$1.73 per square yard. This type of paving was chosen because of the very satisfactory results that had been obtained from its use in other portions of the South Park system.

In the construction of the street the grade was raised slightly. This, together with the fact that the east side of the street was made about 11 inches higher than the west, made it possible to leave the old macadam pavement in place for the most part. Where this was not the case the sub-base was thoroughly rolled. On top of the sub-grade there was placed 6 inches of concrete roughly graded off. This was mixed in a Foote mixer and wheeled to place and spread in horse-drawn Briggs concrete spreaders. The surface was left quite rough so that a good bond would be made between the cement concrete and the asphaltic concrete.

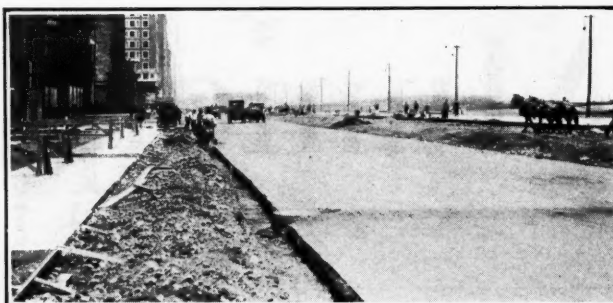
The two-inch asphaltic concrete top was made up of an aggregate composed of 60 per cent slag and granite from  $\frac{3}{4}$  inch down, the granite being of the smaller sizes; 20 per cent torpedo sand, and 20 per cent fine sand mixed with about 8.8 per



TWO-CAR HETHERINGTON & BERNER ASPHALT PLANT USED BY METROPOLITAN CONSTRUCTION COMPANY

cent Sarco asphalt. This was thoroughly compacted with a five-ton roller. A two-car Hetherington & Berner asphalt plant was used for the mixing. The material was taken from the mixing plant to the work in wooden wagons at a temperature of between 275 deg. to 300 deg. Fahr. On top of the compacted asphaltic concrete was painted or squeegeed a thin film of pure asphalt, which filled the pores and made a water-tight surface. Fine sand was spread over this. Considerable of the sand worked into the surface and relieved the dead black color of the asphalt as well as preventing any possible slipperiness.

As mentioned previously, Michigan Avenue has a very heavy traffic and it did not seem feasible to entirely shut this off, so one-half the width of the street was paved at one time. In the middle of the street, where the two sides of the paving were joined, a lap joint was used, the lap being 12 to 14 inches wide. In laying the second half the edge of the section already laid was thoroughly cleaned and painted with asphaltic cement in order to obtain a good bond. Owing to building operations it was found necessary to change the location of the strip first laid from one side of the street to the other during the construction. This and many other similar troubles arose to bother the con-



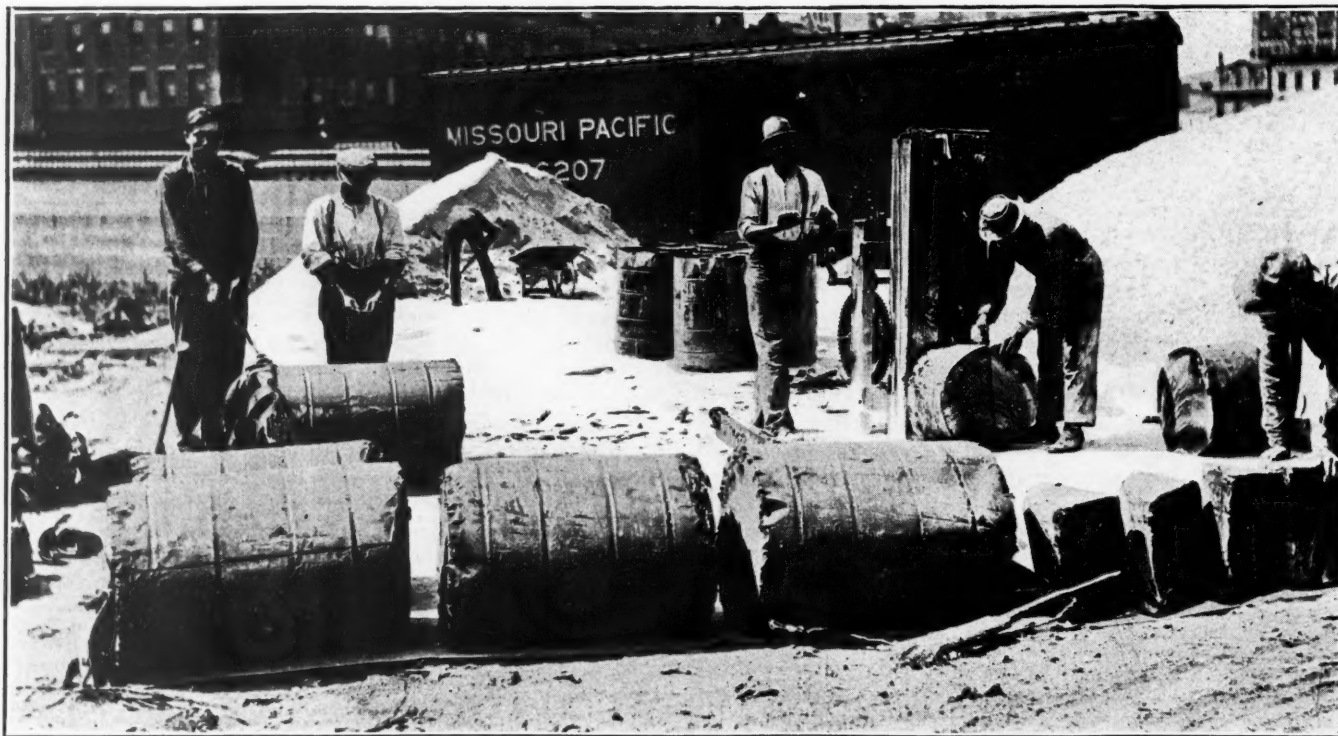
OLD PAVEMENT LEFT IN PLACE FOR TRAFFIC DURING CONSTRUCTION OF NEW

tractor. However, for the most part the work has progressed favorably, about 1,500 yards of surface being laid each day.

An examination made of the pavement about a week after it was laid showed it to be in a very good condition despite the troubles encountered. It was springy and gave under the feet of horses, but neither tore up nor rolled and the caulk prints readily ironed out. At one point the street is crossed by an intersecting street on which there is a very considerable amount of heavy traffic consisting for the most part of dirt wagons weighing from four to five tons. No ill results from this traffic were visible.



DEPOSITING CONCRETE WITH BRIGGS CONCRETE SPREADER



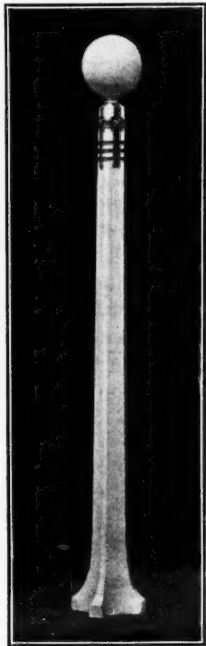
CUTTING ASPHALT INTO PIECES FOR MELTING

The asphalt comes in metal barrels, which are removed in strips. It is then cut to convenient size by use of a cable by the simple contrivance shown



## LIGHTING STANDARD

THERE is now being installed in Lincoln Park, Chicago, under the direction of the Commissioners and Superintendent Myron H. West, a number of lighting standards which are particularly pleasing. These were designed in the department and are being built by the employees.



PHOTOGRAPH OF MODEL

The standards are 15 feet high from the bottom of the base to the top of the column. A 4-foot projection at the bottom, 12 inches square, gives a very firm and stable foundation. The column is 9 inches square at the top, 12 inches at the bottom of the shaft and 18 inches at the base. A 2-inch pipe carried up the center serves as an electric conduit. This also gives some reinforcement, which is added to by four  $\frac{3}{8}$ -inch rods, one in each corner. The top is surmounted by a bronze cap and lamp holder.

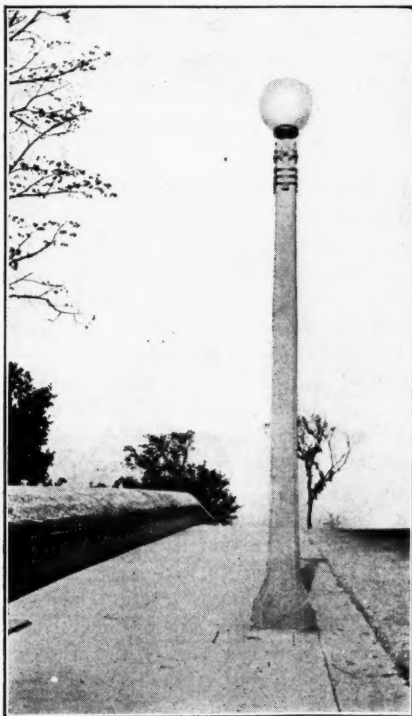
These columns are made of concrete and are cast in metal forms. Red Montana granite and sharp torpedo sand are mixed with white cement. After the column is removed from the mold it is thoroughly washed with acid, which removes the surface cement and leaves the rich red color of the granite.

The cost of these lighting columns is as follows:

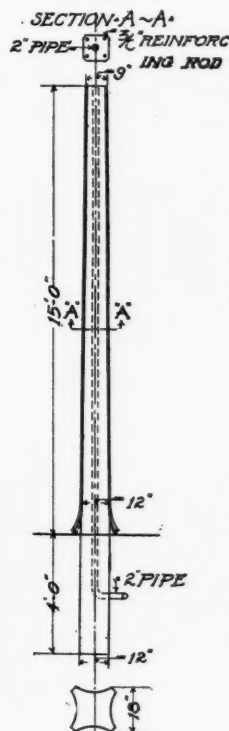
Materials and molding.....	\$11.18
Bronze cap and lamp holder.....	14.50
Lamp .....	\$25.68
	25.50
	\$51.18
Manhole .....	\$5.00
Wiring, etc. ....	2.50
Setting .....	2.50
	\$10.00
Total.....	\$61.18

The weight of the column complete is 2010 pounds.

It will be seen from the above figures that these columns are much cheaper than the iron ones, and they are also much more pleasing in appearance than the ordinary iron standard.



CONCRETE LIGHTING STANDARD IN LINCOLN PARK, CHICAGO



## ALBANY REFUSE DISPOSAL REPORT

### Conditions as to Private Collection—Garbage Fed to Hogs —Advantages of Collecting All Rubbish Commingled—Estimates of Cost of Incinerating

IN February of 1908 the Board of Contract and Supply of Albany, N. Y., requested the Commissioner of Public Works to make recommendations concerning the collection and disposal of garbage in that city. In carrying out this request the Commissioner considered the subject of refuse also, as being intimately connected with that of garbage. His report, prepared after an investigation conducted for many months, contains more information concerning conditions in Albany than is often known or at least made public concerning conditions in cities where they are not particularly satisfactory.

He reports that garbage is collected by more than sixty different farmers, most of whom transport it in barrels, of which from one to fifteen are placed on a wagon. But one covered wagon was found used throughout the entire city. The city ordinance requires that all carts for removing garbage "shall be so constructed as to be water tight and shall be securely covered on top; or the garbage may be collected and removed in sound and water-tight barrels, securely covered on the top." Garbage is usually collected between 7 and 11 a. m. Each collector has his own customers, and it is understood that the householders generally pay nothing for the service, and that some of the larger hotels receive several hundred dollars per year for their garbage. Some streets are traversed daily by a number of collecting wagons, while there are other sections where for some reason no collections at all are made. There is no uniformity about placing the garbage, some property owners putting it at the curb and others in the backyard or indoors. The Commissioner of Public Works, Mr. Wallace Greenalch, attributes to the lack of collections in some districts much of the nuisance resulting from decaying organic matter found at the ash dumps.

Mr. Greenalch, from information obtained from the various inspectors, learned that about 283 barrels of garbage are collected daily, which he estimates to total to about 23 tons. This is being fed to about 3,750 hogs and 3,000 chickens, most of which are raised on sand farms west of the city. He considers the principal objection to this system to be the absence of regularity or even of any collection at all in some districts. The garbage receptacles frequently stand for hours along the curb, and as a rule are not provided with covers and are frequently overturned into the streets. The garbage at the ash dumps and that thrown on vacant lots and other out of the way places is a nuisance which is probably due, in the last analysis, to the absence of a municipal system of collection. Concerning the feeding of garbage to swine, he states that the principal argument against this is that it is unsanitary, causes objectionable odors in the neighborhood and invites the transmission of diseases to the farmer and his family. The chief argument in its favor he considers to be that it enables sixty or more farmers to obtain a living by raising these hogs and chickens, the value of the former being estimated at about \$40,000 a year.

Concerning the disposal of ashes and rubbish, he believes there would be practically no difficulty with the existing method were nothing but ashes and street sweepings deposited on the dumps. But putrescible matters which give rise to odors, and papers which are blown about the city streets for blocks, are both of them sources of much annoyance and a public nuisance.

After reviewing briefly the methods of refuse disposal employed in the past in this country, he refers to the more modern plants at Montreal, San Francisco, the Borough of Richmond (New York), Seattle and Vancouver, and the projects of Milwaukee, Buffalo and Boston.

Concerning the relative advantages of separate collection of refuse in two or three classes as compared with the English system of mixing everything in one bin, he says:

Regarding the advantages of a single collection, it should be noted that the householder has to provide but one set of receptacles, into which are thrown ashes, table wastes, old bottles, tin cans, rags, etc., as fast as they accumulate. Papers, when in any quantity, are usually tied up in bundles and collected along with the mixed refuse. The surplus moisture of the garbage is absorbed by the ashes, which acts as a disinfectant to retard the putrefaction of the garbage during warm weather. The mixture of garbage with ashes is therefore much less objectionable than would be the garbage alone, and much less nuisance is caused by any failure to collect it on time. The refuse receptacles can be left in the building or back yard, where convenient for collection, instead of being left on the sidewalks, where they are very unsightly. The practical difficulties in trying to enforce a separate collection on every householder in the city are eliminated. The nuisance caused by hauling wagon loads of garbage through the city streets is practically removed with a mixed collection, as is also the nuisance of dry ashes blowing about in windy weather. The work of collection is also greatly simplified, as but one set of wagons is required instead of two or three. On account of the shorter hauls, the expense of mixed collection would be somewhat less than the cost of collecting garbage alone and hauling it to a reduction plant, although greater than the cost of hauling ashes to the nearest dump. (This assumes that an incinerator can be placed within the city, and that a reduction plant cannot.—EDITOR.)

It is the opinion of the writer that, all things considered, the single collection and the incineration of mixed refuse in a properly designed destructor furnishes the most satisfactory and economical method of disposing of the garbage, ashes, rubbish, dead animals and other municipal refuse in a sanitary manner.

From the report of the Census Bureau for 1905, he has compiled a table showing the quantities of garbage and of ashes and rubbish collected by various cities in the United States during 1905. Mr. H. de B. Parsons, in his "Disposal of Municipal Refuse," gives the averages for American cities of garbage and of ashes and rubbish as 0.5296 for the former and 2.4391 for the latter. These are seen to agree very closely with the averages of the cities given in this table.

Quantities of Garbage and Ashes and Rubbish  
Pounds per capita per day Collected by Various Cities in the United States during 1905.

City.	Garbage.	Ashes and Rubbish.	Total.	City.	Garbage.	Ashes and Rubbish.	Total.
New York .....	0.45	3.38	3.83	Hartford .....	1.07	3.04	4.11
Philadelphia .....	1.33	3.20	4.53	Nashville .....	0.16	2.28	2.44
Boston .....	0.75	3.20	3.95	Trenton .....	0.65	1.78	2.43
Ruffalo .....	0.36	1.07	1.43	Wilmington .....	0.52	1.81	2.33
Cincinnati .....	0.40	2.33	2.73	Lynn .....	0.61	2.54	3.15
Milwaukee .....	0.51	2.88	3.39	Troy .....	0.68	2.54	3.22
Washington .....	0.72	1.32	2.04	New Bedford .....	0.40	1.18	1.58
Rochester .....	1.04	3.50	4.54	Springfield .....	0.26	2.28	2.54
Syracuse .....	0.42	2.50	2.92	Lawrence .....	0.41	1.09	1.50
Paterson .....	0.29	2.46	2.75	Utica .....	0.77	2.78	3.55
Fall River .....	0.45	1.54	1.99				
Cambridge .....	0.63	2.82	3.45	Average .....	0.57	2.35	2.92
Lowell .....	0.25	2.54	2.79				

The report then presents an estimate of the cost of collecting and incinerating the refuse of the city of Albany, this being assumed to amount to about 30 tons per day of garbage, and 120 tons of other refuse. Collection is estimated to require wagons costing \$12,500, and a wagon shed costing \$10,000; and interest, depreciation and repairs on the former is assumed at 20 per cent annually and on the latter at 10 per cent. Collecting the refuse is estimated to cost \$1.70 per ton, and an allowance for superintendence and office expenses of \$1,500 is made and in addition \$2,400 for inspectors. This gives a total annual cost of collection of \$100,475, or \$1.84 per ton.

Assuming a single 150-ton destructor plant, with no provision for utilizing the steam, the land is estimated to cost \$5,000; buildings, chimneys, etc., \$45,000; furnaces, \$60,000; engineering and incidentals, \$10,000; giving a total cost of the plant of \$120,000.

The cost of operating such a destructor is estimated to be:

Superintendence and office expenses (one-half).....	\$1,500
3 engineers at \$80 a month.....	2,880
24 stokers at \$70 per month.....	20,160
One weigher and cleaner at \$60 per month.....	720
Repairs and supplies.....	1,000
Interest and depreciation, 9 per cent of \$120,000.....	10,800

Total annual cost..... \$37,060

It is estimated that 40 tons of clinker would be produced per day which could be sold at 50 cents per ton, producing a revenue of \$7,300 a year. This would give a net cost of disposal of 54 cents per ton.

The burning of this refuse should be capable of turning into steam from 1 to 1¼ pounds of water per pound of refuse, so that from 360 to 450 boiler hp. would be available; which, with a deduction for losses in generation of electricity and transmission to the pumping station, should yield 300 hp., equivalent to a saving of about 5,000 tons of coal per year. A plant for such utilization, it is estimated, would cost about \$5,000 additional for buildings, the same for engineering and incidentals, and \$50,000 for the power plant, transmission line and motors. The operation of a plant so modified would require in addition the wages of 3 oilers and cleaners, estimated at \$2,340 per year, and additional interest and depreciation amounting to \$5,400; giving a total annual cost of \$8,740 greater than if the power be not utilized. On the other hand, there would be a saving at the pumping station of 5,000 tons of coal at \$2.29 per ton, of \$1,680 for firemen and \$3,000 for depreciation and repairs on the pumping plant, a total saving of \$16,130. This would reduce the net cost of disposal to 41 cents per ton. This added to the collection would make a total of \$2.25 per ton.

Mr. Greenalch estimates that a still further saving could be made by operating three separate destructors located in different parts of the city so as to reduce to a minimum the average length of haul; this being suggested by the fact that the collection will apparently cost more than four times the disposal. This would permit of each cart collecting three loads of refuse per day instead of two, the estimated average when all the refuse must be hauled to one plant. This would reduce the cost of collection, including interest and depreciation, to about \$1.25 per ton. It is estimated that the land for the three destructors would cost \$7,500 instead of \$5,000; that the cost of the furnaces would be the same; that the buildings and chimneys would cost \$72,000 instead of \$45,000; and that the engineering and incidentals would be increased by \$500; the three plants, therefore, costing \$30,000 more than a single plant of the same capacity. For operation, 9 engineers instead of 3 would be required, making an additional cost for this of \$5,760; 27 stokers instead of 24, adding \$2,520; three weighers and cleaners instead of one, adding \$1,440; and an addition of \$500 for repairs and supplies and of \$2,700 for interest and depreciation. This would increase the total annual cost by \$12,920, or the net cost of disposal from 54 to 78 cents per ton. This would make the total cost of collection and destruction \$2.03 per ton, allowing nothing for the utilization of steam power. It is thought probable, however, that sufficient power could be utilized by the city or sold to bring this cost down to \$1.75 per ton.

## CONCRETE VS. BRICK FOR SEWERS

IN a report on the Boston sewers, Metcalf & Eddy, consulting engineers, of that city, discuss the arguments advanced for concrete and brick sewer construction. They consider that the argument that it is practicable to make brickwork more nearly water-tight than concrete loses its force to a large extent when the construction is in a locality which is not materially subject to the influence of ground water, and also when applied to surface water drains. Moreover, concrete as a building material is used in a great many structures which should be as nearly water-tight as possible, and has given satisfactory results in cases of very many sewers.

An argument which has been advanced in favor of brick linings for inverts is that the brick are said to withstand the erosive action of the flow of sewage or surface water better than concrete does. Under certain conditions where velocities of flow are very high, there is no doubt that this argument has considerable force. It does not, however, justify the use of brick in the arch, and sewers laid with concrete inverts are very common. Under some circumstances, possibly, brickwork may be constructed as cheaply as concrete, but in general it will cost from 33 1/3 per cent to 100 per cent more.



### SIDEWALK ORDINANCE AND SPECIFICATIONS

BEAVER FALLS, Pa., a few weeks ago adopted a general sidewalk ordinance which seems rather drastic for a small city or borough, but Borough Engineer Carl S. Donaldson writes that they find its provisions are resulting in much improvement to the town, and they are now having very little trouble in enforcing them. This ordinance provides that "All owners of property, fronting and abutting on any of the public streets or avenues of the borough of Beaver Falls, Pa., shall lay down and construct curbing and sidewalks and keep the same in good repair, in front of and along side of their respective properties." "Owners of lots or parcels of land fronting upon any of the streets or avenues of the said borough, in front of and along side of which a sidewalk and curbing has not heretofore been constructed and laid down, are hereby required, within thirty days after being notified by the Street Commissioner, to construct and lay down a curbing and sidewalk."

Other sections provide that all sidewalks built after the passage of the ordinance shall be of sandstone or cement concrete, complying with specifications which have been adopted by the borough. The widths of sidewalks on certain specified streets are then given; these being probably exceptions to the general rule, which rule is stated to be, that the sidewalk width shall be 10 feet on 60-foot streets, 8 feet on 50-foot, 7 feet on 40-foot, 5 feet on 30-foot and 3 feet on 20-foot. In all cases these are the distances from the building line to the curb line. The paved portion is required to be 6 feet wide on 60-foot streets, 5 feet on 50, 40 and 30-foot streets, and 3 feet on 20; the pavement extending from the building line out to the specified distance. It is also provided that all the spaces between the curb and the sidewalk shall be filled to grade and sodded and the grass plot kept in neat condition by the property owner or tenant.

Before beginning construction the owner of the property must obtain a permit and have grade stakes set by the borough engineer, who furnishes these at the expense of the borough. The Street Commissioner is required to constantly inspect the sidewalks in the borough and to report to Council any which need repairing or rebuilding, which may thereupon order this to be done. If the owner does not do this work within thirty days Council may have it done by a contractor, who presents his bill to the owner, and if the owner will not settle the same, Council is to do so and collect the cost plus 10 per cent, which if not paid promptly, may be collected by the borough solicitor, plus 5 per cent for attorney's fees, either by action at law or by filing it as a lien.

The specifications cover stone and concrete curbing, combined concrete curb and gutter, concrete and sawed stone sidewalks and vitrified block or brick driveways. The stone curbing is to be of sandstone, 6 inches thick at the top and for a depth of not less than 18 inches, not less than 5 inches thick at the bottom and not less than 24 inches deep. The stones must not be less than 4 nor more than 7 feet in length unless shorter pieces are required for closures. The stone is to be tool or crandall dressed, true and smooth on top and for a depth of 12 inches on the face and 4 inches on the back. The end joints are to show an opening of not more than  $\frac{1}{8}$  inch for a depth of 12 inches from the top. At street intersections circle curbing is to be used, having a curve of 4 feet radius. At alley intersections 2-foot radius is used. The face is to be set vertical and the curbing is to be laid on a foundation of gravel or broken stone 6 inches thick and 12 inches wide. (The vertical face is, in our opinion, a mistake, as it permits a wheel to scrape the entire face of the curb, whereas a slight batter would permit it to touch the bottom of the curb only. Concrete foundation is, of course, more expensive than gravel or broken stone, but we think it is well worth the difference in cost). All the concrete used is to be mixed 1:2:4, using clean sand, and gravel not exceeding  $1\frac{1}{2}$  inches in diameter. The sand and cement are mixed dry and the gravel is added before any water is applied, when the whole is thoroughly mixed. The gravel is forced back from the face of the forms by spade-like tools, so that only the fine material appears at the face; and as soon as the concrete is

set sufficiently to stand alone the forms are removed and the surface troweled. The curb is divided into entirely separate stones, which are ordinarily 6 feet long.

In making concrete curb and gutter a wearing surface of one cement and two sand is placed in position inside the forms so as to be approximately one inch thick.

The sidewalks are made of 6 inches of cinders compacted by rolling or tamping, then 3 inches of concrete, upon which is to be immediately placed the wearing surface material composed of one cement and two sand. The walk will be divided into blocks not over 5 by 6 feet.

Sawed stone sidewalks are to be of sandstone of uniform texture and color, sawed smooth, not less than 4 inches thick on business streets, and  $2\frac{1}{2}$  inches on residence streets. The heavier stones are to be laid on 6 inches of cinder and the lighter stones on  $7\frac{1}{2}$  inches of cinder. The stones are to be laid so that there will be a space of  $\frac{1}{8}$  inch between them at the surface. Driveways may be of vitrified block or brick set on 6 inches of clean gravel covered with 2 inches of sand cushion. After the brick or blocks have been rolled to a smooth surface the joints are to be filled with sand.

### STREET CAR MAIL BOXES

EVERY car of the Grand Rapids Street Railway Company, of Grand Rapids, Mich., has a mail-box attached at each end, and residents can get quick transmission of mail by dropping their letters into these boxes. All the cars come to one central point and a postman is stationed there to take mail from each car as it comes by. This mail is taken to the Post Office in time to be sorted for each outgoing train. Des Moines is said to be the only other city in the country enjoying such service.



MAIL BOX ON CAR, GRAND RAPIDS

## SEWER FLUSHING AND VENTILATION

Experience and Experiments in Winnipeg—Flushtanks and  
Hose Used—Three Lamp Ventilators Tested—  
Bacteriological Results Obtained

THE annual reports of the City Engineer, H. N. Ruttan, of Winnipeg, Man., for 1907 and 1908, contain some interesting data concerning sewerage and plumbing in that city. At the end of 1907 there were 160½ miles of sewers in the city and a year later about 168 miles. During the latter part of 1907 and throughout 1908 there were 419 flush tanks in operation. These tanks are flushed nightly except in wet weather, and in addition one or two gangs flush regularly with fire hose. The number of tank discharges per month in 1907 varied from 1,832 in August to 11,732 in November (except that the tanks were not used at all in April). The total number of discharges for the year was 77,132 and the total number of gallons so used was 21,403,384, making an average number of gallons per discharge of 277. In 1908 the minimum number of tank flushings was 1,548 in April and the maximum was 19,969 in March. The total number of discharges during the year was 136,026, and the total amount of water used estimated at 36,320,208 gallons, giving 267 gallons per discharge. The total length of time hose flushing was carried on during any one month in 1907 varied from 405 minutes in April to 16,310 in November, the total for the year being 1,477 hours, and the amount of water used being estimated at 50 gallons per minute. In 1908 the hose flushings per month varied from 1,775 minutes in April to 33,680 in February, the total number for the year being 2,822 hours, the water used this year being estimated at 100 gallons per minute. On a basis of total water used for flushing during each month, the months would be arranged in the following order, ranging from the minimum to the maximum: In 1907, April, August, May, July, June, January, March, September, February, October, December, November. In 1908, April, May, June, December, September, July, October, August, January, November, February, March.

Considerable trouble had been experienced from lack of proper ventilation of the sewers, and beginning with 1907 the plan was tried of ventilating the system through untrapped house connections. Existing house traps were removed from the plumbing systems of twelve buildings at selected locations, and of the 2,996 buildings in which plumbing was installed during the year 1,186 did not employ main house traps, so that by the end of the year there were about 1,200 untrapped house connections ventilating the sewers. During 1908 of 1,408 buildings in which plumbing was installed 630 omitted the house traps, so that by the first of this year there were 1,828 untrapped house connections. Where no house traps were used the Plumbing Inspection Department required the fixture trap to be ventilated in such a manner as to prevent siphonage. In commenting on the effect of this, Plumbing Inspector James Smith said: "This has undoubtedly lowered the temperature of the air in the sewers and increased the tendency to freeze up the sewers and sewer connections, particularly at the manholes where the cold air enters." We do not, however, find any statement that sewers were actually frozen, and we can hardly believe that, even in the cold climate of Winnipeg, it was possible to obtain sufficient ventilation to cause the freezing of sewage in underground sewers, unless it might be in depressions in house connections where sewage could stand undisturbed for several hours.

In 1908 tests were made of the Webb Lamp and Sewer Ventilator at three different points. The following table shows that no air was passing through the lamp during an average of about 37 per cent of the time. Inspector Smith states that when the wind is from the south or southeast there is practically no air passing through the vents, this probably being due to the location of the sewer outlets. City Bacteriologist J. H. Leeming made a test of the effect of these lamps in destroying bacteria and odor. In February he exposed culture plates to the air of

the sewer, both before and after it had passed over the burner in the ventilator at the corner of Charlotte and Bannatyne streets. The plates were exposed for a period of one hour, but no attempt was made to determine how much air passed through the ventilator during that time. On the plates exposed to untreated sewer air the number of bacteria colonies was so great as to be uncountable. But on the plates exposed to the heated air there was absolutely no bacterial growth. The temperature of the air as it immersed at the outlet was 270 degrees F. The foul odor characteristic of sewer air was entirely removed by the heat of the flames. It would appear, therefore, that such air as passed through the ventilator was sterile and non-odorous. Unfortunately, no effort apparently was made to determine to what distance the effect of the ventilators extended. It hardly seems possible that this could have been more than one-half mile from each lamp, and as the cost of maintenance of these ventilators, together with interest on their capital cost, amounted to about 45 cents per day per lamp, this would mean at least 90 cents per mile of sewer per day, or about \$330 per year, and to ventilate the 168 miles of sewers would apparently cost over \$55,000 a year.

Data Concerning Installation of Webb Lamps and Sewer Ventilators

	At Main and Bannatyne Sts.	At Assini- boine St.	At Charlotte & Bannatyne Sts.
No. of days observed.....	277	287	30
No. of times out.....	3	7	1
No. of times sewer vent frozen .....	8	11	
No. of times gas pipe frozen .....	17	19	
No. of times no air passing through. Other cause than from freezing	66	94	2
Maximum cubic ft. per hour .....	4,815	3,175	2,732
Average cubic ft. per hr.	988	672	2,041
Minimum cu. ft. per hr.	17	52	1,578
Diameter of sewer.....	5 ft.	4 ft.	2 ft. 6 in.
Min. velocity in sewer ft. per minute .....	.015	.07	5.50
Max. velocity in sewer ft. per minute .....	4.07	4.22	9.30
Capital cost .....	\$252.06	\$252.06	\$61.89
Cost of maintenance.....	\$145.01	\$145.01	\$13.32
No. of days working ....	341	356	36
Cost of maintenance per day .....	\$0.42	\$0.42	\$0.37

## A LETTER CONCERNING FILBERTINE

Editor, Municipal Journal and Engineer,  
231-241 West 39th St., New York City.

Dear Sir—On the train to-day while traveling from Philadelphia to New York, I read in your September 1st issue, under your "News Items from Trenton," the statement that "Counselor John H. Backes, before a Judge of the Supreme Court of New Jersey, declared that he has been creditably informed that 'filbertine' is a 'fake.' This information, he states, was obtained from a recognized street paving expert, who said that he had made a careful analysis of the so-called 'filbertine' and found it to contain absolutely no special merit, and, in fact, no quality not possessed by any other combination of good sand, stone, and asphaltic cement."

This opinion is contrary to that of State Commissioner Hunter of Pennsylvania, State Commissioner Gilkyson of New Jersey, Captain Edward M. Markham, Corps of Engineers of U. S. A., Assistant to the Engineer Commissioner of the District of Columbia, the Chief Engineer of the Pennsylvania Railroad, and to that of many other of the leading authorities of the United States.

I am willing to leave the matter to the intelligence of your readers and would simply state in conclusion that "fake" contractors do not court inquiry, and that yesterday in Washington the laying of 'filbertine' pavement by the Washington agents, the Cranford Paving Company, under the supervision of Captain Markham, was also under official observation by Civil Engineer Cooke of the Bureau of Yards and Docks of the United States Navy, by Mr. Gillen, representing Colonel Spencer Cosby, in charge of public buildings and grounds in the District of Columbia, and by one of the staff of Director Logan W. Page, United States Public Roads Department of Agriculture and representatives of the Washington "Post" and other Washington papers.

Filbertine was laid last September at the intersection of Belmont avenue and City Line, prior to the great Quaker City automobile race, and has been subject to every change of temperature and the greatest conceivable automobile and heavy vehicular traffic, without showing a sign of wear; and other work in Philadelphia, Trenton and elsewhere shows equally good results.

Yours very truly,

Pennsylvania Building,  
Philadelphia, Pa., Sept. 3, 1909. T. HUGH BOORMAN.



# MUNICIPAL JOURNAL AND ENGINEER

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It is further requested that our Subscription Department be notified if copies are not received promptly.

Readers are invited to contribute to the MUNICIPAL JOURNAL AND ENGINEER, either in the form of special articles or of letters discussing matters of current interest.

It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

SEPTEMBER 15, 1909.

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## Location of Refuse Incinerators

ONE of the most interesting parts of the report concerning refuse disposal in Albany, N. Y., abstracted on another page, is that part of the estimate of cost giving an idea of the advantage from a financial point of view of reducing the haul, even at the expense of increased cost of destructors, this applying not only to the use of a number of destructors in place of one only, but also applying to the advantageous location of a single destructor. In fact, the reasoning would have still more force in the latter case, since the expense of construction would be increased little, if any, as an offset to the saving in collection. The difficulty, however, arises when it comes to selecting the location for the destructors. There is a popular

prejudice against having these as near neighbors and popular protest frequently has more to do in determining the site than considerations such as are here described. The selection of three sites instead of one might well prove too much of a difficulty for the Councilmen. The claims of the citizens, of course, should be carefully considered, but in the end we believe that it will be difficult in many cases for a Council to reach any decision, whether for three sites or for one, until they have arrived at the state of mind illustrated by remarks recently made by a Councilman in an Eastern city to the effect that no matter what site they selected, the adjacent property owners would raise a strong protest and they might as well make up their minds in the beginning to disregard such protests altogether and locate the plant at the site dictated by considerations of efficiency and economy.

## Plumbing in New Orleans

IN the semi-annual report of the Sewerage and Water Board of New Orleans, La., for the last half of 1908, it is stated that during that one-half year 1,586 plumbing permits were issued and 1,210 sewer connection permits; the 376 houses included in the former and not in the latter being those which had not yet been reached by the sewer system. Although the method of inspecting the plumbing, which is carried out by the Plumbing Inspection Department, is quite similar to that found in other cities, a description of this kind of work may perhaps be of interest and information to a number who are not familiar with the methods in common use. The method is described in the report as follows:

The Plumbing Department was organized some time in October, 1906, under Mr. John Lewis Porter as Supervisor. He remained at its head until November 1, 1908, when G. A. Middlemiss, present incumbent, succeeded him. A system of inspection was instituted by Mr. Porter under a set of rules which had been adopted by the Board of Plumbing Examiners, and which met with the approval of the Sewerage and Water Board. These rules remained in effect until July 11, 1908, when they were thoroughly revised and officially promulgated July 19, 1908. These rules as revised, with a few exceptions, have proved quite satisfactory, and are at this time still in force.

Under these rules no person, firm or corporation is allowed to do plumbing work to be connected to the sewerage system unless they have first obtained a license from the Board to do such work, and have executed and filed a solvent bond of \$1,000 with the Secretary of the Board. Before the issuance of a license, the applicant must make a satisfactory showing that he is capable of doing plumbing work, and of carrying on the business of a master plumber.

Up to this time there are 110 licensed master plumbers.

The first requirement of this department is for the master plumber to file a plan, signed by the property owner (authorizing the work to be done), showing the nature of the work to be installed, sizes of pipe, kinds of traps to be used, methods of venting, etc. If it be in conformity with the rules, it is approved, whereupon two permits are granted the plumber: one to do the work, the other to permit the premises to be connected to the sewer, after the work has been satisfactorily completed. Two dollars are charged for the first fixture and 50 cents for each additional one as inspection fees. At least four inspections and tests are required for every job before it is declared satisfactory in its entirety. They are as follows: ball, house connection, water and peppermint.

The ball test is an inspection and test of the underground terra-cotta pipe which runs from the property line back, receiving the discharge from the plumbing fixtures in the building and conveying same to the public sewer in the street.

The inspector sees that the pipe is laid at a grade of not less than one-quarter of an inch to the foot, and that the joints are properly caulked and cemented. The line is then tested by sending a wooden ball, one-half inch less in diameter than the diameter of the pipe, through it.

The house connection inspection is made where the public and house sewer are jointed together at or near the property line. This inspection consists of seeing that the proper fittings are used, clean-outs brought up, so as to enable the proper cleaning out of the line in the event of stoppage, and the proper concreting of the whole.

The water test is made after the plumbing work inside of the building has been "roughed in." The stacks are filled with water and allowed to remain in that condition for some hours. The inspector then examines the joints closely and if they are improperly caulked, leaks will appear at those points. At the time of this inspection it is the duty of the inspector to examine the kind of pipe used, i.e., whether standard or extra heavy (for in some instances only the latter can be used), the depth of hubs, the sizes of pipe, the proper use of vents, and, in fact, to see that in every particular, the work conforms to the rules of the Board and is sanitary in every respect. This is the severest test put on the work, for, having passed this test, the only thing necessary to be done is the setting of the fixtures.

The fixtures having been set, the work is then subjected to what is known as the peppermint test. This test consists of pouring down each stack a mixture of hot water and oil of peppermint. The fumes that arise from this mixture are so pungent that if the work is not absolutely tight, the odor of peppermint will be immediately detected in the premises. The inspector then tries out all the fixtures for the purpose of ascertaining whether or not they are in good working order. At the time of this inspection all vaults and cesspools must be excavated, cleaned and filled, and the work as a whole must be in a completed condition.

It is only after these tests and inspections have been made that what is known as a final certificate is issued. This certificate is to the effect that the plumbing has been inspected and tested, and found in substantial accord with the plumbing rules and regulations.

### NEW PAVING BRICK SPECIFICATION

By GEORGE B. McGRATH, Zanesville, Ohio

CITY ENGINEERS having to do with brick street pavements will be interested in a new form of guarantee which promises to give them first quality in vitrified paving brick. While samples of paving brick are generally submitted which meet the requirements of the specifications, sometimes difficulty is experienced in securing shipments of material of the standard specified. What is commonly called the Standard Rattler test for paving brick, as approved and recommended by the American Society of Municipal Improvements and the National Brick Makers' Association, has been so generally adopted by cities, large and small, East and West, that practically all paving-brick manufacturers have been obliged to install rattlers and test their product before shipping. Mindful of this fact and remembering that cement manufacturers are ordinarily required to submit certificates of test with each carload of cement shipped, the question has arisen why paving-brick manufacturers should not certify to City Engineers the results of their factory test in some valid and responsible form.

The proposition has confronted City Engineers in all parts of the country how to draft their specifications so they would have the opportunity of selecting the best quality of paving brick and at the same time not draw a specification which would exclude competition from any desirable source. Every paving-brick manufacturer claims that his product is as good as the best, and the plan has recently been suggested of putting the quality question right up to the manufacturers themselves. This is done by what is known as the "optional specification," the form of which is presented herewith, and which makes it optional with the manufacturer whether or not he wants to give the guarantee named. The usual open vitrified brick specification is used and the "optional specification" added.

Columbus, Ohio, with upward of 2,000,000 square yards of brick-paved streets, has adopted the Standard Rattler Test for paving brick and fixed the maximum abrasive loss at 18 per

cent. This standard has been in vogue in that city for six or seven years. Other cities which employ the same specification are: Grand Rapids, Mich.; Cincinnati, Ohio; Yonkers, N. Y.; Newark, N. J.; Reading, Pa.; Dayton, Ohio; Lansdowne, Pa., and others. With the action of these cities as a precedent, the 18 per cent abrasive loss has been named in the optional guarantee specification, which reads as follows:

Any bid based upon any vitrified paving brick which the manufacturer will guarantee to show less than 18 per cent abrasive loss under the Standard Rattler Test as approved and recommended by the American Society of Municipal Improvements and the National Brick Makers' Association, supporting such guarantee with the following affidavit certificate of test for each and every carload of paving block furnished, will be given consideration on account of said guarantee as an evidence of good faith that first quality paving block will be delivered for use in the work.

#### FORM OF CERTIFICATE

(This certificate shall issue only in the following form, and shall be forwarded within three days from date of shipment of each carload.)

The following is a certificate of test made at the testing laboratory of .....  
(Name of Laboratory or Company)

..... at .....  
(Location)

on ..... 1909, on 4-inch re-pressed vitrified .....  
(Date) (Name of Block)

paving block in accordance with Standard Rattler Test as adopted by the National Brick Makers' Association and the American Society of Municipal Improvements:

Original Weight .....  
Weight after Test .....  
Loss in Pounds .....  
Percentage of Loss .....

The above lot of tested paving block were forwarded in car .....  
(Give Car Number and Initials) to .....  
consigned to .....  
(Name of Contractor or Consignee)

Before me, a Notary Public, in and for said County, personally appeared .....  
(Name)

who being by me duly sworn deposes and says as follows:

That he is the authorized tester of the .....  
(Name the Laboratory or Company)

..... at .....  
(Location of Laboratory)

and that he made the above described tests of paving block and that the results of this test are correctly and accurately shown in the foregoing certificate, and further affiant says not.

(Tester.)

County of ..... } Affidavit.

State of ..... ss: }  
Sworn to before me and signed in my presence this the .....  
day of ..... 190.....

[Seal]

Notary Public.

### COST OF STREET LIGHTING

In a recent inquiry into the cost of street lighting in Bridgeport, Conn., Mr. James E. English, President of the United Illuminating Company, stated that the cost per lamp per year for 1905 and 1908 had been as follows:

	For the year ending	
	Feb. 1, 1906	Feb. 1, 1909
Number of lamps.....	550	615
Fuel .....	\$14.35	\$15.76
Oil, waste, water supply.....	1.67	1.65
Labor at station.....	7.78	8.21
Repairs to plant.....	4.24	2.05
Generating cost .....	\$28.04	\$27.67
Carbons and globes.....	6.92	5.90
Trimmers .....	7.64	8.79
Linemen (maintenance) .....	5.78	6.88
Lamp repairs .....	.90	1.34
Other labor (supply and electric).....	3.81	3.99
Distribution cost .....	\$25.05	\$26.90
Insurance and taxes.....	2.16	2.49
Expense (general) .....	3.10	4.49
Office salaries .....	4.25	3.11
General Expense .....	\$9.51	\$10.09
Generating cost per lamp.....	28.04	27.67
Distribution cost per lamp.....	25.05	26.90
Insurance and taxes per lamp.....	2.16	2.49
General office expenses.....	7.35	7.80
Total operating cost per lamp.....	62.60	64.86
Depreciation at 1 per cent per k. w. h. per lamp .....	13.00	13.00
Total cost per lamp per year.....	\$75.60	\$77.66

The increased cost, in spite of larger output and greater efficiency, was due, he said, to increase in wages, cost of coal and of most other supplies during the past three years.



## NEWS OF THE MUNICIPALITIES

Current Subjects of General Interest, Under Consideration by City Councils and Department Heads—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

## ROADS AND PAVEMENTS

## Labor Law Enters into Higher Cost of Paving

Guthrie, Okla.—Anticipating comment on the increase in the price of asphalt paving as indicated in the paving bids submitted to the City Council recently, T. E. Gavin, representative of the J. F. Hill Construction Company, whose bid was the lowest presented, explains that the  $7\frac{1}{2}$  cents increase per square yard over the contract price for work now being done by this company is due to several causes, one of the most potent being the changed hours of labor. When the Hill Company entered into its first paving contract with the City of Guthrie it was on the 10-hour workday basis; but under the State's vigorous enforcement of the eight-hour workday, Mr. Gavin explained, a new condition had to be considered in making estimates on work. Moreover, there has been a decided increase in the price of every item of material that is used in street paving, including the asphalt itself; but with all this, he said, the increase will not amount to more than 25 cents per square yard.

## Engineer Defends City's Pavements

Harrisburg, Pa.—The statement in a local paper that Harrisburg's street paving has proved so expensive to keep in repair that it has become a burden to the people, brought a prompt reply from City Engineer M. B. Cowden. Replying to the statement that repairs to asphalt had cost \$27,000 a year, the City Engineer says the figure was \$4,950. Asphalt, he says, is used extensively because the people want it, and it is easy to keep clean. Regarding brick, he says it is more difficult to repair than asphalt, considering the area renewed, but it is not repaired so much, as depressions do not look so bad. Sheet asphalt, he says, is the most popular pavement with property owners and least expensive, and is the material most frequently asked for in petitions to Council.

## Good Report of Cork-Asphalt Pavement

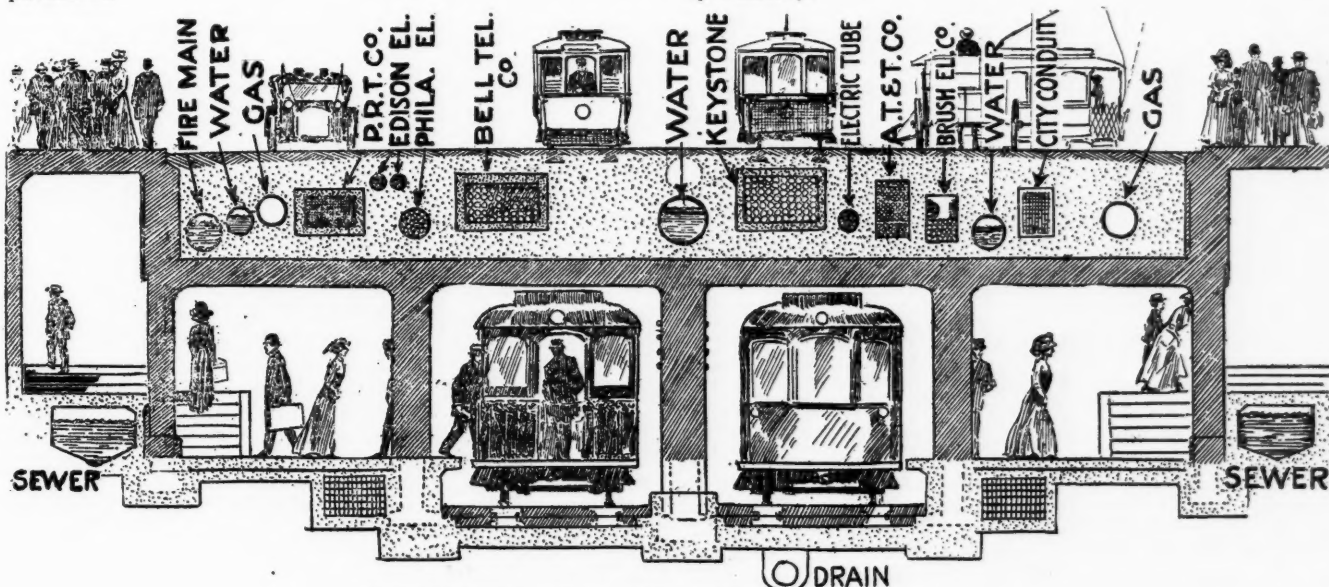
London, England.—Rudolph M. Patterson, of Chicago, Ill., who is making a study of street and road paving in England in behalf of Mayor Fred A. Busse, has been very favorably impressed with the cork-asphalt pavement. The streets about Windsor and Buckingham palaces are paved with it, and in one street it has been laid for 17 years. Mr. Patterson quotes King Edward as favoring this class of pavement.

## Would Widen Street on Swiss Plan

Schenectady, N. Y.—Dean Benjamin H. Ripton has discovered a solution for the difficulty of widening Jay street while in Europe this summer, and is quite enthusiastic about the plan, which occurred to him as he was walking through the arcaded streets of the quaint city of Berne in Switzerland. The suggestion he makes is that instead of buying and tearing down many good buildings, the first stories be bought and the buildings remodeled so that the street would be arcaded and the upper overhanging stories of the buildings preserved for use.

## A Study in Underground Structures

Philadelphia, Pa.—Many people are wondering whether the new wooden block pavement on Market Street, now being laid, will retain its shape, with the many ditches that have been cut in the street during the past few years. The distance between building lines on the street is 100 feet. Each sidewalk is 19 feet wide and the roadway 62 feet. The largest excavation that has been made in the street was for the subway. The distance between the outer walls of the two tubes is 37 feet and their height 14, and the roof 6 feet below the surface of the street. In the center of the street is a 20-inch water pipe, with many branches, which run to both sides, connecting with 10-inch pipes along each curb. From the latter are the house services. On the south side of the street is a high-pressure water pipe 16 inches in diameter. There is a 12-inch gas main on each side of the street. On the north side of the 20-inch water main in the center of street is a telephone conduit belonging to the Keystone Co. of 60 terra cotta ducts. The Bell Telephone Company has a similar conduit on the south side of the water main. The American Telephone and Telegraph Company has a wooden conduit near that of the Keystone company. Near by is a conduit carrying the wire of the Brush Electric Light Company. The Philadelphia Electric Company has a terra cotta conduit on the south side of the street. The city itself has a conduit for the wire of the fire alarm and police signal system on the north side of the street nearer the curb than the others. The Philadelphia Electric Company and the Philadelphia Rapid Transit Company also have conduits. A sewer runs through the street varying in size from 7 feet by 7 feet to 4 feet by  $3\frac{1}{2}$ . It will require nice work to consolidate the foundation, and in case of damage to water and gas pipes the consequences might require the services of many lawyers to determine the responsibility.



CROSS-SECTION OF MARKET STREET, PHILADELPHIA

Showing Underground Structures

### Regrading Plans Delayed

Pittsburg, Pa.—After spending the entire summer in attempts to procure waivers of damages for proposed change of grade in the so-called "Hump" district, Mayor Magee has secured a majority of waivers, but he does not consider that to be sufficient to satisfy Councils and the public that the work can be done without putting the city to the expense of paying property damages. He says he will not take the responsibility of putting the city into jeopardy on this point. Some of the consents are impossible to get because the property belongs to estates where the trustees do not have the absolute power of release. Some individual owners appear to be procrastinating with a view to getting the improvement and money damages besides.

### Low Bid for Asphalt Received

Seattle, Wash.—The lowest bid ever submitted in the City of Seattle for asphalt paving was recently opened by the Board of Public Works. The prevailing price has varied during the past few years from \$1.85 to \$2.25 per square yard. The bid referred to, submitted by the Barber Asphalt Company, was \$1.50. Owing to competition, there has been a reduction in the price of sand and gravel from 90 cents to 45 cents per cubic yard. This, the contractor explained, permitted him to submit the low figure.

### City to Pay Quarter of Cost of Resurfacing

Rochester, N. Y.—In accordance with the views of City Engineer Fisher, an ordinance has been drawn providing that the city at large pay 25 per cent of the cost of resurfacing pavements.

### Ordinance Protects Brick Paving

Wheeling, W. Va.—An ordinance has been passed requiring the use of a sprinkler when watering streets paved with brick. The object is to prevent washing out of the material in the joints, as may happen from constant use of a heavy stream.

## SEWERAGE AND SANITATION

### Disinfection for Other Diseases

Davenport, Ia.—Dr. W. A. Stoecks, City Physician, has requested Council to pass an ordinance requiring that premises where certain diseases have occurred other than those named in the statutes shall be disinfected. Among these other diseases are erysipelas, typhoid fever and tuberculosis.

### Thirty Dairies Inspected in Day

Indianapolis, Ind.—Robert H. Alexander and D. D. Mills, City Dairy Inspectors, made an automobile trip of 150 miles, in which they inspected about 30 dairies. The trip included dairies between Indianapolis and Greensburg and in the vicinity of Shelbyville and Greensburg which supply milk to Indianapolis consumers. During the trip two men conducting dairies near Acton were told that they could not supply milk to Indianapolis in the future unless they build new milk rooms.

### Quality of Niagara River Water

Niagara Falls, N. Y.—The State Department of Health has been making analyses of the water supplies of the cities taking their water from the Niagara River, including Buffalo, Tonawanda, North Tonawanda, Lockport and Niagara Falls. The Department reports that the results of these examinations "show strikingly the horizontal stratification that probably takes place in the swift-flowing Niagara River." The cities between Buffalo and Niagara Falls, including Lockport, take their water well out from the American shore, and its quality is such as to indicate that it escapes pollution from Buffalo's sewage. But Niagara Falls takes its supply from a canal fed from the American side of the shore and the pollution is so excessive that the Department concludes that it must receive a portion of the sewage emptied into the river from Buffalo. "These conditions indicate," says Commissioner of Health Eugene H. Porter, "that Buffalo sewage probably remains fairly close to the American shore all the way down the river, and because of this the Tonawanda, North Tonawanda and Lockport intakes escape most of the pollution, leaving it to be absorbed by their sister city, Niagara Falls. A change in the water supply of Niagara Falls is badly needed."

### Citizens Warned to Boil Water

Johnstown, Pa.—The Board of Health has posted throughout the city cards warning all persons to avoid typhoid fever by boiling the water. It sets forth that the typhoid fever situation, which has not been bad at any time this season, is improving somewhat, and the health authorities hope to keep up this state of affairs by preventing the development of new cases. It is claimed this can only be accomplished by the general public boiling all drinking water. All the dams and reservoirs aiding in furnishing the public water supply are considered to be in a dangerous condition. The recent showers have washed the watersheds and have had a tendency to pollute the water. While some of the samples sent away do not show up bad, others do. A sample of water from the St. Clair reservoir contained 3,000 bacteria and 30 bacilli coli to the cubic centimeter. Another sample taken from the artesian well of the Johnstown Trust Company showed 3,200 bacteria and 66 bacilli coli.

### Objections to Cheap Sewage Disposal System

Pittsburg, Pa.—The proposition submitted by Osborne Congelton, a New York inventor, to install a sewage disposal system in Pittsburg for \$1,800,000, has encountered objections which probably will prevent the city from considering his scheme further. Mayor Magee has written to the inventor, stating the city's position in the matter. The Mayor doubts that the city has a right to make a contingent contract, as suggested by Congelton, whereby the city would be bound to carry out the inventor's plan in case a preliminary test was satisfactory. It is also thought that the State Health Department would not approve Congelton's scheme because it allows sewage to flow into the river during floods. The plants proposed by Congelton would be covered by high water. Congelton proposed to build disposal plants at the mouth of each discharging sewer, the sewage to be treated by a chemical process.

### Providence Has Good Health Record

Providence, R. I.—The death rate in Providence in 1908 is the lowest ever recorded for the city, as is shown by Dr. Charles V. Chapin, Superintendent of Health, in his annual report to the Board of Aldermen. The report gives a death rate of 16.57 per annum per 1,000 living during the year, this rate being based on the fact that there were 3,570 deaths in the year out of an estimated population of 213,000.

## WATER SUPPLY

### Meter Bills Too Small

Baltimore, Md.—The committee on meters of the Water Board has recommended that no meters be installed in future without the approval of the Board, to whom the application, with necessary data, shall first be submitted. The facts that brought about this decision are these: Of 4,100 meters now in service 687 pay less than \$1 a quarter and 364 pay less than 50 cents. The meters have been paid for by the city.

### Wooden Water Pipes More Than Century Old

Newark, N. J.—Excavators in Washington street have unearthed some wooden pipes more than a hundred years old, which are taken as proof by antiquarians here that the city had a water supply other than wells long before the time when the public system was installed. When the wooden pipes were dug up it was found that several of them had been plugged up at the end and still contained water. The pipes were made from tulip tree trunks—a soft wood having a straight grain. A small hole about an inch and a half in diameter had been bored through the middle of the trunks. It was found that on several of these connections had been made to smaller wooden pipes, which had rotted away. Some of the connections were plugged with hardwood corks, while in one case a connection had been made with slim hand-beaten lead pipe. Almost without exception the pipes were found to have remained in good condition, resisting the action of moisture. The pipes varied in length from 18 to 35 feet, and were in the old section of the city known as "The Swamp." They were found from 15 to 20 feet underground, indicating the extent to which land had been filled in there since they were laid in the eighteenth century.



### Lake Altoona Work Now Progressing

Altoona, Pa.—The work at Lake Altoona is progressing much more rapidly than formerly and the officials of the Water Department are gratified with the progress that is at last being made. The contractors are now working on the core wall and the concrete work is also proceeding rapidly, while the work on the embankment is also being rushed. It is expected that there will be no further delay in the operations between now and winter. The city's water supply has been holding its own fairly well. The loss in the impounding dam is about four inches per day, the stage of the water being about 37 feet. The Kittinging Point Basin is almost full. There is a good flow from the several streams feeding the reservoirs, and the officials of the Department are confident that there will be an abundant supply of water until the fall rains begin to come unless they fail to come as last year.

### A Little Water Works Disappointment

Vallejo, Cal.—The idea of having a water works and meters in Vallejo seems doomed to disappointment. City Engineer Arthur Noyes figured that pipes and meters could be put in for \$250; but the contractors figured \$455 and over. Many of the residents will probably continue to get water free from the reservoir as they have in the past. Several property owners are entitled to free water in exchange for right of way and riparian rights.

## STREET LIGHTING AND POWER

### Committee Sees Advantage of Natural Gas

Baltimore, Md.—A committee of Council has made a trip through cities of the Middle West for the purpose of investigating the benefits derived from the supply of natural gas. An application for a franchise to lay pipes and supply natural gas is pending before Council, and the members wanted information at first hand as to the conditions under which it is usually delivered and the benefits received. The committee is practically one in its opinion that natural gas is a boon to any city. The advantage of gas for domestic uses, heating, cooking and lighting impressed the committee most favorably.

### Baltimore Cannot Purchase Burners

Baltimore, Md.—Having failed to purchase a modern burner for use on the city's street gas and naphtha lamps, Superintendent of Lighting McCuen states that he believes all street lamp maintenance companies have combined against the use of any burner manufactured by any company which sold its type of burner to Baltimore. Before preparing specifications for the maintenance of lamps for 1910 Mr. McCuen hit upon the idea of having his Department purchase some up-to-date burner. Had he been able to do this he would have given the city absolute possession of the street lighting equipment. With such a club to hold over the heads of the officials of street lighting companies, the Superintendent declared that he could at any time have prevented the city from getting into the hands of a monopoly, and thus be compelled to pay higher prices for lights. To this end Mr. McCuen sent out numerous letters to the manufacturers of street lighting burners, but so far he has been unable to secure any kind of burner. Because of his inability to purchase the burners, Mr. McCuen will have to permit the lighting company which secures the contract for 1910, to be let September 15, to install its own burners.

### Concrete Dam to Replace Wooden Structure

Luray, Va.—Lane Brothers have been awarded the contract for building a large concrete dam across the Shenandoah River, one mile from Luray, to replace the old wooden dam, leaks in which affected the lighting of the caverns and the town.

### Gas Not Up to Standard

Sioux City, Ia.—Prof. W. W. Scott has submitted a report of his analysis of gas furnished by the Sioux City Gas and Electric Company. He says that the candlepower is deficient—12 whereas it should be 20—due to the use of an insufficient supply of hydrocarbon oil in the manufacture of the illuminant. The heating power of the gas is about 550 units, whereas it should be 600.

## FIRE AND POLICE

### Fire Protection System Started

Baltimore, Md.—After almost a year of preparation the work on the high pressure fire protection system is about to be started. Test holes to determine the obstructions which will be met in laying the pipe are now being sunk all over the area in which the system will operate, and the actual work of installing the pipe will soon begin. Delays were met in drawing plans and specifications and in the delivery of material.

### Police Force to Be Enlarged and Reorganized

Birmingham, Ala.—Chief of Police Bodeker is figuring up the requirements of the force due to the annexation of territory. He will ask for more men, probably twice as many as he now has. He wants a secretary or assistant who can work and at the same time advise. The mounted patrol will be extended probably so as to cover the whole annexed territory. As every officer will be required to call headquarters hourly, a telephone sergeant will be necessary.

### New Rules for Kansas City Police

Kansas City, Mo.—The Police Commissioners have promulgated a new set of rules which are very strict and will work great changes in the Kansas City force. They prohibit a policeman from drinking, swearing or playing cards; they demand that he shall be always respectful to the people he meets; that he shall curb his temper, and that he shall refrain, as much as possible, from conversation while on duty. They also prohibit the use of tobacco in any form while on duty. A policeman will be required to salute his superiors whenever he meets them while he is on duty. When he enters the presence of the Chief, Captain or Sergeant he must remove his hat, salute and stand at attention. When a superior enters a room where a policeman is sitting the policeman must rise, remove his hat, salute and stand at attention.

### Fire Marshal for Alabama

Montgomery, Ala.—The Governor has signed the Fire Marshal bill, passed at the recent extra session of the Legislature. It is one of the few in the South, and because of its passage, with consequent protection from incendiarism, the fire companies have agreed to reduce rates.

### To Combine Duties of Chauffeur and Electrician

Newburgh, N. Y.—The Fire Department Committee of the City Council is figuring how it can employ a good chauffeur for the Ringgold Hose Company without going to increased expense. It is suggested that the \$200 a year paid a man for looking after the fire alarm system could be added to a driver's salary so as to make it sufficient to hire a chauffeur who is also an electrician.

### Novel Police Method on Holiday

Seattle, Wash.—On Seattle Day at the Alaska-Yukon-Pacific Exposition, when an unusual number of policemen were required at the fair and to head the procession, a novel method was adopted to protect the city. Six automobiles were enlisted in the service, and, bearing plainclothes men, patrolled the various sections.

### Washington Fire Department the Best

Washington, D. C.—After a tour of the United States, begun last May, during which time he has visited the leading cities of the country and inspected their Fire Departments, Clarence F. Samuelson, Deputy Chief of the Manila Fire Department, declared that the Washington Department is the best equipped and managed of any in the country.

### Improve Lots About Engine House

Washington, D. C.—In line with the efforts of the District Fire Department to improve the property surrounding the engine houses, the Commissioners have decided to improve a plot of ground which it owns adjoining No. 8 engine house, on North Carolina avenue near Seventh street Southeast. The plot, which lies between the engine house and the Eastern Market, has been an eyesore to the people living in the vicinity for some time; and the firemen have declared that they would look out for keeping the plot of District ground in an attractive condition if it were properly graded and put in shape to be improved by the District.

## GOVERNMENT AND FINANCE

### Atlantic City's Mayor Arrested

Atlantic City, N. J.—The crusade against the Sunday selling of liquor in this city came to a sensational climax when Mayor Franklin P. Stoy was arrested upon a warrant, charging him with ignoring a notification from State Attorney-General Wilson ordering him to enforce the Sunday closing law. Mayor Stoy, following the serving of the warrant, went before Magistrate Hughes and entered \$5,000 bail for a further hearing.

### Muskogee Wants Commission Form

Muskogee, Okla.—The Commercial Club is advocating a new charter and commission form of government for the city. A resolution will be prepared and presented to Council asking for an election for the freeholders to draft a new charter. If action is not taken petitions will be prepared and circulated among the taxpayers for signatures to compel the Mayor to call the election.

### A Budget Problem

Oakland, Cal.—The following resolution, in the form of a question to City Attorney Stetson, has been introduced by Councilman Elliott and passed:

Can the Council pass an ordinance or resolution that will legally prevent the Council, Board of Works or any department of the city government from authorizing, directly or indirectly, the expenditure of public moneys for any other object or purposes than those specified in the budget adopted by the Council as the basis for fixing the city tax rate for the fiscal year of 1909-10?

Can such an ordinance or resolution be proposed as will prevent legally the auditing of a demand by the Finance Committee or Auditor other than for a purpose specified in the budget, save and excepting where such demand is passed as an emergency measure by at least four members of the Auditing Committee and not less than eight members of the City Council?

Councilman Elliott contends that under existing conditions the budget, further than being a basis for the fixing of the tax rate, is a joke so far as regulating the expenditure of moneys is concerned, many sums provided in the budget for certain matters being diverted by the Council to other channels. It is because of this that he is seeking light on the legality of his proposed procedure.

### Municipal Contracts May Be Illegal

Spokane, Wash.—Contractors with thousands of dollars tied up in municipal work in Spokane have been advised by their attorneys that contracts recently awarded to them by the Board of Public Works are illegal, as two members of that body are residents of the same ward, a violation of the amended city charter. Carl W. Tuerke, a resident of the First Ward, in which Commissioner O'Brien lives, who was named by Mayor Pratt, claims that he complied with the law by engaging a room in a downtown hotel the day he was appointed, and that he had a right to resume his former domicile. He says also the Corporation Counsel had advised him that the charter applies only at the time of the appointment and not to his service after he becomes connected with the Board. This is new in legal jurisprudence in the Northwest, if not in the United States, and it is likely the highest court in the State will be asked to rule on it.

### Municipal Code Commission in West Virginia

Wheeling, W. Va.—The Municipal Code Commission, authorized by the last Legislature to compile a uniform municipal code for West Virginia cities, has been conducting meetings at Webster Springs and Wheeling. The commission is composed of E. R. Kingsley, of Parkersburg; George I. Neal, of Huntington, and W. H. Bishop, of Spencer. The Commission has already held meetings also in Huntington and Charleston, and will visit other cities. At the meeting in Wheeling, held in the Second Branch Council Chambers, members of the city government, members of the Municipal Committee of the Board of Trade and other prominent people were present. Locally there is a sentiment for a class of code to be adaptable only to cities of a certain size. It is the opinion that Wheeling should be in the first class, being the more important, owning municipal plants and having conditions that would prevent her being classified with other cities.

### Tahlequah Wants Commission

Tahlequah, Okla.—An official committee from Tahlequah recently visited Tulsa to study the workings of the commission government in that city. Tahlequah wants the commission government in a form slightly different from that in Tulsa. Several other Oklahoma cities have had committees visit Tulsa in the past few months with a view of adopting the commission form of government. The graft exposure at Sapulpa may lead that city to abandon the aldermanic form of government for the plan which is working so successfully in Tulsa.

### City Officials Violated Ordinances at Youngstown

Youngstown, O.—City officials have discovered that the candidates for office have been violating the law by tacking their announcement cards and advertisements on telephone poles and fences about the city, which is prohibited by ordinance. Candidates for Common Pleas Judge, as well as ward aspirants for office, have used the property of others to boom their candidacy. The officials will not permit further use of the poles and fences for this purpose.

## REFUSE COLLECTION AND DISPOSAL

### To Sprinkle and Clean Streets

Guthrie, Okla.—A street sprinkling and cleaning ordinance is before Council which is intended to make it possible to keep the streets of the city in perfect condition. Under the provisions of the ordinance lots in the business district will be assessed two mills on their valuation, while all lots in the resident district, abutting on streets which have been paved or which will be paved during the present year, will be assessed one-half mill on the assessed valuation.

### Garbage Collector Imposed Upon

Lockport, N. Y.—Gottfried Kohler, city garbage contractor, has protested against the way in which taxpayers shove every kind of rubbish onto him. One man who has a number of apple trees put a number of bushels of the windfall apples in front of his place and demanded that the city cart them away. The Aldermen, as a result of the situation, have decided to amend the specifications and be explicit in just what shall constitute garbage. They will also endeavor to arrange for a twice-a-week collection in the downtown districts. The fund has been increased from \$3,000 to \$4,500. Every street in the city will be covered.

### Explains Cause of Garbage Complaints

St. Paul, Minn.—Thirty-one complaints about indifferent garbage collection were filed September 4 with the Health Department, as compared with four complaints filed on the same day last year. This disproportion reflects conditions for the past six or eight weeks. In the first two weeks in August this year 425 complaints were filed, as compared with 110 complaints for the same period last year, a ratio of about 4 to 1. "We are doing everything we can to handle the garbage properly," said Harry Burnham, Superintendent of Garbage Collection, "but try as we may, we do not seem to be able to satisfy people. Of course the main trouble is that we have not teams enough. This time of the year is a heavy season for garbage, for we have to handle all the refuse from the bulky vegetables, but never before did the complaints come in so thick and fast. Heretofore the collectors were allowed to heap up their wagon boxes, and thus could cover a larger territory each day. But now, when they are required to keep their covers down, each load is a half or a third smaller than in the past. There are other handicaps under which we are working. In former years householders, to secure the collection of their garbage by the city teams, were obliged to sort it carefully. Nothing but stuff that could be fed to hogs was allowed to be put in the cans, but since the published criticisms of this department, many of the householders throw all sorts of refuse, such as tin cans, broken glass jars and the like, into the cans. The garbage of these people should not be collected at all, but rather than have any trouble about it, we are doing the best we can under very trying circumstances."



### Scientific Garbage Survey Provided For

Long Island City, N. Y.—The practice of dumping garbage from a population of over 250,000 on open dumps within centers of population is to be replaced by a system as perfect as that which any city enjoys. An appropriation has been made by the Board of Estimates for a survey such as was made in the Borough of Richmond. Experts will go over the whole subject and divide the borough into districts for collection and location of disposal plants.

### Incinerator Expensive When Worked to Capacity

Norfolk, Va.—At the direction of the Finance Committee, D. H. Farquharson, Superintendent of the Street Cleaning Department, has prepared a statement of the cost of operating the city's new Decarie incinerator plant. Mr. Farquharson says that while the plant is capable of burning 50 tons per 24 hours, its guaranteed capacity, it is not most economical to work with it at that rate. He says that the plant can be operated at the lowest expense when burning from 25 to 30 tons per 24 hours. During the watermelon season, when garbage contained a lot of rind, or when garbage is especially wet, the cost of running the machine is greater. January to July of this year the cost was 29 cents per ton; since July 1 the average cost per ton has been but 24½ cents. The difference, says Mr. Farquharson, is due to additional fuel and labor during the first six months of the year. The city has had the Decarie plant about 10 months.

## RAPID TRANSIT

### Company Would Increase Distance Between Track Centers

Bridgeport, Conn.—Superintendent C. H. Chapman of the Connecticut Company has notified City Auditor Keating, as Secretary of the Paving and Sewer Commission, that the appeal of the New York, New Haven & Hartford Railroad Company from the action of the Common Council in refusing to grant the privilege of using 10-foot centers for the new trolley tracks in Main street, had been mailed to the State Board of Railroad Commissioners. Mayor Henry Lee is opposed to further widening of the distance between trolley centers on account of their taking up too much of the street in the business section of the city, but he has no objection to an increase of distance between track centers in other parts of the city.

### Refuse Referendum on Tayler Plan

Cleveland, O.—At a caucus of Mayor Johnson's followers in the City Council it was decided to reject the formal proposition made by the Cleveland Railway Company to settle the present franchise dispute by submitting a franchise ordinance, based on the plan proposed by Federal Judge Robert Tayler to the voters of Cleveland under the Schmidt referendum law, at the regular election next November.

### Jersey City Gets Decreased Fare

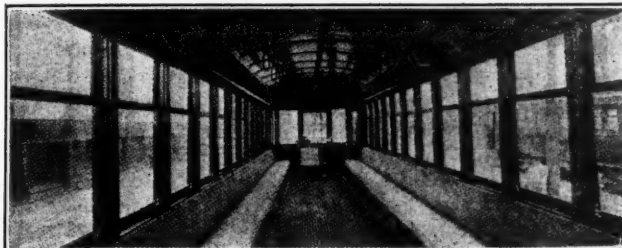
Jersey City, N. J.—Street and Water Commissioner George J. Brackner states that he has been assured by President William G. McAdoo, of the Hudson and Manhattan Tunnel Company, that the fare from all parts of Jersey City to New York, when the tunnels are opened, would be 5 cents. According to President McAdoo, this was decided upon at a session of the company's directors, and, acting on this assurance, the Board has passed on third reading the ordinance giving certain privileges to use the streets for station entrances, so much desired by the company. The 5-cent fare clause is not to be incorporated in the ordinance, however, as President McAdoo states that this will be impossible under the interstate commerce laws.

### Danger from Plow Pits

Washington, D. C.—The District Electric Railway Commission will consider the question of protecting open street railway plow pits. Inspector L. P. Bradshaw, reporting on a complaint of a citizen, said he found the pit protected by a little red flag. As the pit is within the right of way of the railroad, he recommended the question of protection be referred to the Railway Commission.

### New Steel Street Car

Pittsburg, Pa.—The first of the new steel traction cars for use on the lines of the Pittsburg Railways Company has been placed in operation. It arrived in the city from the builders' shops and was at once fitted out and started on test service on the Fifth and Hamilton avenue line, generally accounted one of the hardest lines in the city. The entire departure from old lines in the new car attracted much attention as it passed through the streets. The officials of the company stated that the operation of the car



INTERIOR OF STEEL CAR; UNUSUALLY WIDE

was experimental and that it would be thoroughly tested pending the arrival of others like it. The car is 45 feet long and has steel underframe, riveted steel plates for sides and a roof that differs from others, in that it is minus the usual ventilator deck, while the floor is of the same level throughout, thus avoiding the step from the car to the rear platform that is required in the older form of cars. The weight of the car is nearly 6,000 pounds less than the wooden car, and at the same time it is stronger. The thin steel plate sides makes possible wide aisles and the roof arrangement gives room for larger windows. A new ventilating system has been introduced, and while the first car is supplied with longitudinal seats, the remainder of the lot will have cross seats on one side and a longitudinal seat on the other. The aisle will be wide, in spite of this arrangement because of the increased width of the interior of the car. Another departure in the plan is bringing the motorman from the front platform directly into the car, for there is no front cab nor platform on these new cars. The rear doors are so arranged that when they are shut, the steps to the car are covered, and this prevents passengers from getting on or off while the car is in motion or before the car door is opened for them. The new car is the first steel car that has been placed in service in the streets of Pittsburg. It is expected that some eighty of them will be in service this fall. It was designed by engineers of the Pittsburg Railways Company.

### Law Regrading Transfers

New York, N. Y.—By a State law which became effective recently the selling or giving away of a street car transfer is made a misdemeanor. The transfer problem has been a serious one for the railway companies and all sorts of dodges have been resorted to by patrons to secure rides to which they were not really entitled or to furnish a ride to some one else. In New York City it is said that regular clearing houses are established by the clerks in the large stores. Those returning from dinner, for instance, take transfers to points to which they know some of their fellow clerks are bound in going for their midday meal. The transfers are exchanged, and in this way two clerks go to their dinners on one fare, although they may reside in entirely different sections of the city. The law now makes all this a misdemeanor punishable by a fine or imprisonment, or both.

### Must Refund Fares if Cars Do Not Run

San Francisco, Cal.—The ordinance requiring street car companies to refund money to passengers when a line stops operating received the favorable consideration of the Public Utilities Committee. This ordinance was drawn by Supervisor Murphy some months ago for the purpose of protecting passengers from losing their fare when the traffic was interrupted. In its original form it required the company to refund the nickel, but the committee, upon the representation of the officials of the United Railroads, have amended it so that the company must give the passengers a check which will be good during a period of five days on any of the other lines of the same company.

## MISCELLANEOUS

### Citizens Proud of City Hall

Albany, Ga.—Albany's new City Hall, which will have cost between \$40,000 and \$50,000 when completed, is fast nearing completion. The building is three stories high and is built of buff brick and Bedford limestone, having a pink tile roofing. When completed it will be occupied by the City Fathers and Fire Department, the third story being used as an armory for the Albany Guards. It is one of the handsomest buildings in the city, and the citizens are proud of it.

### City Rents Pier to Advantage

Baltimore, Md.—What is regarded as a good business deal was negotiated by the Board of Estimates when permission was granted the Maryland Dredging and Contracting Company to use the pier at the foot of Webster street, which is now being used by the city for wharf space for one of the municipal iceboats. Under the terms of the agreement, the city will receive from the Maryland Dredging and Contracting Company an annual rental of \$1,800 for the Webster street wharf. According to Mayor J. Barry Mahool, under the new arrangement the city will save in two years more than sufficient to pay for the improvement at Commercial wharf.

### Auto Ambulance Service

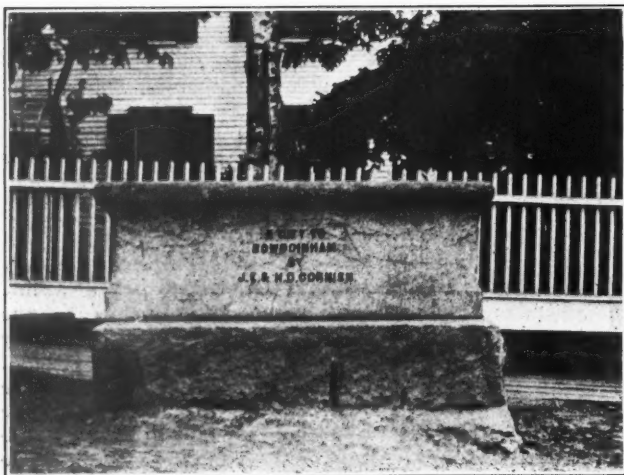
Dallas, Tex.—The contract with the Gallaway Taxicab Company for the city's auto ambulance service for the year beginning Oct. 1, 1909, was approved as to form. Commissioner Doran is to confer with the company, and the contract will, if satisfactory, be signed by the Mayor and become effective. A few things to be determined by the City Attorney before this contract is signed will be the question whether the ambulance will be a city rig or merely hired by the city in its work, and the matter of liability for damages in any accident that might occur in the operation of the machine; whether it will be allowed to proceed at a faster rate than other vehicles in the streets of the city; the amount of bond to be required of the company for the performance of the work; whether the driver will be in law considered a city employee or an employee of the company with a contract.

### Mayor of Tokyo Offers 20,000 Cherry Trees

Tokyo, Japan.—Mayor Ozaki of Tokyo has offered 20,000 cherry trees as a gift to President Taft, to plant in the new park on the banks of the Potomac River, Washington, D. C.

### Town Given Handsome Drinking Fountain

Bowdoinham, Me.—The town of Bowdoinham, Me., has been given a substantial drinking fountain for horses, of simple and artistic design. Made of Maine granite, the fountain is too heavy to be bowled over by carelessly driven teams, a common fault of such fountains, and is wide enough to accommodate two horses at a time. The fountain was presented by J. E. and H. D. Cornish.



Courtesy Kennebec Journal.

SUBSTANTIAL DRINKING FOUNTAIN

### Progress of Parkway Pergolas

Philadelphia, Pa.—The work of ornamenting that portion of the Parkway which has been opened to travel is proceeding rapidly and will be completed within a few weeks. This consists of the construction of pergolas and shelters along the sidewalks. The contract price for this work was \$37,807, the contractor being Henry E. Baton. William E. Groben, of the Department of Public Works, is the architect who designed the structures. From Nineteenth street,



Courtesy Philadelphia Record.

PERGOLA, PHILADELPHIA PARKWAY

or Logan Square, to the western end, at Fairmount Park, the pergolas will stretch along both sides of the roadway, covering a little more than half of the sidewalks. The shelters, designed chiefly to break the monotony of the pergolas, are to be placed at intervals. In reality they belie their names, for they would not afford shelter from the mildest summer shower. As they are constructed the pergolas would be no more effective in this regard, but it is intended to plant fast-growing vines about them so as to make a leafy tunnel for the passage of pedestrians. The pergolas are of the Italian style, 12 feet wide and 13 feet high. They rest on a foundation of concrete and blue limestone. There will be twelve separate structures. The columns are Ionic and made of gulf cypress wood, painted white and surmounted by composition capitals. They are being so constructed that, if the time ever comes when the avenue is broadened to the authorized width, they may be unbolted and removed to what will then be their proper location.

### Difficult Caisson Work

Jersey City, N. J.—One of the most difficult caisson jobs ever attempted in North Jersey is being done by the F. R. Long Company, of Hackensack, in the construction of a new bridge on the Paterson Plank road, over the Hackensack River, between Jersey City and Newark. Owing to the nature of the river bottom there and the pressure of water, mud and quicksand, in reaching bedrock for the foundation of the center piers, extra heavy timbers in unusual quantities have had to be used. In the construction of the main caisson 50,000 feet of 16 x 16-inch yellow pine timbers were required.

### Red Lights on Baby Cabs

Los Angeles, Cal.—Baby cabs and wheelbarrows are included in the new speed ordinance passed by the City Council, which provides that all vehicles shall display red lights at the rear and white lights at the front. The City Prosecutor pointed out the ridiculous feature of making no exceptions to push carts, baby carts, etc., but the ordinance was not changed.

### Municipal Medals for Babies

Portsmouth, Va.—Mayor J. Davis Reed has adopted an original method for the discouragement of race suicide in his municipality. He proposes to present a medal to every baby born in the city. On one side of the medal will be engraved the names of the baby and its parents and the date of birth. On the reverse side there will be impressed the seal of the city represented by a full-rigged sailing ship.



## LEGAL NEWS

### A Summary and Notes of Recent Decisions—Rulings of Interest to Municipalities

#### Contracting Debts—Public Buildings

*Hightower et al. vs. City of Raleigh et al.*—Though legislative authority is desirable, it is not absolutely necessary to enable municipal authorities in cities of the size of Raleigh, N. C., to contract debts for the erection of a municipal building, since such a building is a recognized necessity, as much as a courthouse is to a county. The approval of a majority of the qualified voters of a city is not necessary to validate a debt contracted to procure the necessary funds for the construction of a municipal building recognized to be a municipal necessity. A special tax cannot be levied or a sinking fund created to take care of a municipal indebtedness without legislative authority. Though courts have the power to determine what are necessary public buildings, and what classes of expenditures are necessary expenses of a municipal corporation, the power of determining the kind of a building needed or its reasonable cost is vested in the legislative and municipal authorities, and not in the courts. For the exercise of powers conferred by the Constitution, the people must rely upon the honesty of persons elected to fill places of trust, and courts have no power and are not capable, if they had the power, of controlling the exercise of power conferred by the Constitution upon the legislative department of the government.—Supreme Court of North Carolina, 65 S. R., 279.

#### Sewer Ordinance Reasonable

*Allman vs. City of Mobile.*—Mobile City Ordinance No. 830, requiring all persons owning property on sewered streets to connect closets, etc., with the sewers, and prescribing punishment for failure to comply with a notice to do so by the plumbing inspector, was reasonable.—Supreme Court of Alabama, 50 S. R., 238.

#### Negligent Grading of Alley.

*Thillman vs. Mayor, etc., of City of Baltimore et al.*—A city is liable for damage to property due to the negligent manner in which an alley was filled and repaved, though it employed an independent contractor to do the work, where it retained control thereof. Though the powers granted a municipality to open, grade and pave streets, and to construct such gutters and sewers as in its judgment the public convenience may require, are discretionary, any particular plan that may be adopted must be reasonable, and the manner of its execution is, with respect to the right of the citizen, a mere ministerial duty, and for any negligence in the execution of the work the municipality will be held responsible. Evidence, in an action for damage to property due to the negligent manner in which an alley was filled and repaved, held sufficient to require a submission of the case to the jury.—Court of Appeals of Maryland, 73 A. R., 722.

#### Bonds—Validity

*Farmer vs. Mayor, etc., of Town of Thomson.*—Objection raised by a citizen of the town as to the regularity of the notice of the calling of the election came too late after the judgment of validation. A notice of the time and place of the hearing having been published in a newspaper by the clerk of the superior court of the county where the municipality was situated, the bonds of which were being validated, on application for an injunction to restrain the issuance of the bonds, the judgment of validation will not be held void, and the injunction granted, on an objection contending that the clerk of another county, where the order nisi was made returnable, should have published the notice.—Supreme Court of Georgia, 65 S. R., 180.

#### Assessment of Benefits—Methods

*In re City of Seattle.*—While an assessment for street improvements should be based on the benefit to the property alone and not to the owner, yet, if the amount determined on is right, it cannot be changed because the result was arrived at by the wrong method.—Supreme Court of Washington, 103 P. R., 20.

#### Building Regulation—Covered Ways

*Jordan et al. vs. Swasey et al.*—Statutes 1907, p. 531, c. 550, regulating the construction, alteration, and maintenance of buildings in Boston, by section 12 declares that every building shall have, with reference to its height, condition, construction, etc., reasonable means of egress in case of fire, satisfactory to the commissioner. Section 13 provides that no part of any structure, except cornices, permanent awnings, string courses, window caps and sills, bay windows, under such terms, regulations, and restrictions as may be required by the mayor and board of aldermen, and outside means of egress as "otherwise provided," shall project over any public way or square. Section 17 prohibits less than two means of egress from every story of a building used above the first story for the storage or sale of merchandise, one of which means may be an outside fire escape. Held, that the phrase "otherwise provided," in section 13, refers to the provisions of sections 12 and 17, and hence, where it appeared that sufficient means of egress satisfactory to the building commissioner had been provided in the building in question, the erection of a proposed covered way attached thereto was within the general prohibition of section 13, and properly disallowed.—Supreme Judicial Court of Massachusetts, 89 N. E. R., 108.

#### Injury to Pipes—Liability of Contractor

*Seattle Lighting Co. vs. Hawley.*—A city contract for street grading was assigned by the contractors, and in the course of the work the assignees used dynamite, thereby injuring a gas company's main. Neither under the terms of the original contract or of the assignment was any supervision of the work reserved by the city or by the original contractors, except as to the results to be obtained; the assignees becoming to all intents and purposes independent contractors. Held, that in the absence of any showing that the use of dynamite or other explosive was within the contemplation of the parties, or was customary in making improvements of like character, the grading and improving of a street is not necessarily or inherently dangerous to gas pipes, and hence the original contractors were not liable.—Supreme Court of Washington, 103 P. R., 6.

#### Construction of Sewers—Payment

*Naylor et al. vs. McColloch, Mayor.*—A contract for the construction of a sewerage system, stipulating that the city may pay for the work in legally issued bonds, or in cash out of the general fund, as it may elect, but that the city shall "pay for any advertising, etc., required to satisfy the attorney" of the contract, or that the bonds are legally issued, requires the contractor to accept legally issued bonds, and not to merely accept such bonds as his attorney shall advise him are legally issued; and where such attorney assumes that it is impossible to issue any valid bonds in any way, the contractor cannot refuse to perform because of the failure of the city to pay the cost of advertising, etc., required to satisfy the attorney of the legality of the bonds; the terms "etc." meaning other things of like character.—Supreme Court of Oregon, 103 P. R., 68.

#### Liquidate Damages—Penalty

*Turner vs. City of Fremont et al.*—An agreement between a city and a bidder for paving work that a deposit of 5 per cent of the amount of his bid required to be made by the bidder "shall be considered as liquidated damages" and forfeited to the city if the bidder's proposal is accepted and he fails to enter into a contract will be construed in accordance with its terms, as one for liquidated damages and not for a penalty, and in view of the fact that the actual damages were uncertain, and could not then be known, such agreement is valid and enforceable, without regard to the amount of the actual damages as afterward ascertained.—United States Circuit Court of Appeals, 170 F. R., 259.

#### Sewer Assessment—Change in Plans

*Thayer Lumber Co. et al. vs. City of Muskegon.*—Changes in the plans and specifications for sewers, made in the resolution for reassessment, which were of small consequence compared with the magnitude of the work, would not affect the validity of the reassessment.—Supreme Court of Michigan, 122 N. W. R., 188.

## NEWS OF THE SOCIETIES

**International Association of Municipal Electricians.**—At the fourteenth annual convention of the association, in session at Atlantic City, N. J., papers on the following topics are being read and discussed: "The Construction of Underground Conduits," "Grounding of Alternating Current Secondaries," "National Electric Code, and Its Proper Interpretation," "Locating Faults in Fire and Police Telegraph Circuits Without Opening the Lines," "Progress of the Fire Alarm Telegraph," and "The Storage Battery for Fire and Police Telegraph Systems."

**Association of the Chiefs of Police of the State of New York.**—The association held its annual convention in New York, N. Y., August 30. The session began in the office of General Schoefel, Chief of Police of the Erie Railroad, and wound up in Long Island. The Chiefs were the guests of the New York Police Department after their business session. At the meeting the following named officers were elected: Chief William C. Bell, president; Chief John J. Jameson, vice-president, and Chief James L. Hyatt, secretary and treasurer. General Schoefel was chosen as the New York City representative on the board of governors. During the session several papers were read on police matters. Chief of Police Sylvester of Washington, president of the International Association of Chiefs of Police, read one in which he dwelt with great minuteness on the good work accomplished by co-operation between the several departments. All this could not have been done, he said, if there had not been hearty good will shown and a desire on the part of all to work together. The next meeting of the association will be held in Schenectady during the last week in August, 1910. Commissioner Baker had put the police boat "Patrol" at the disposal of the Chiefs, and they boarded the boat at 1:30 o'clock for a sail around Manhattan Island. Borough Inspector Holahan, of Brooklyn, was with the Chiefs, and he accompanied them around Manhattan. The visitors were due at Dreamland and Luna Park at 3 p. m., but they did not reach the first-named place until 5 o'clock. Nevertheless, they found a bountiful collation all ready for them, and General Schoefel turned the officials over to the tender mercies of the Coney Island precinct and Inspector Holahan.

**League of Third-Class Cities of Pennsylvania.**—The tenth annual convention of the league was held at New Castle, Pa., September 1-3, with nearly 250 delegates in attendance. Mayor Harry J. Lusk gave the delegates a warm welcome, and F. P. Cummings, City Solicitor, Williamsport, responded. Treasurer J. Craig, Jr., Chester, made his report, showing a balance of \$500. J. A. Gardner, City Solicitor, New Castle, presented the report of the law committee. The topic, "What Can Be Done Toward Procuring the Necessary Legislation to Regulate Public Utility Corporations and Procure the Taxation of Their Real Estate for Local Purposes," was discussed by D. S. Seitz, City Solicitor, Harrisburg. He called attention to the fact that public service corporations, such as traction, telephone and electric companies, now pay no taxes in cities, except the small amount collected in taxation upon the poles

used, the corporations entirely escaping any payment upon their extensive realty holdings and valuable franchises. Solicitor Seitz thought few members of the Legislature realize how vast an amount cities lose through this, and suggested that the league make an organized effort to have the statutes so changed that the taxes may be levied upon property owned by public service corporations privately owned, upon the same footing as realty held by private individuals. F. P. Schoonmaker, City Solicitor, Bradford, followed along the same lines, and the convention passed a resolution suggested by Mayor Weaver, York, that the league take the matter up with the next Legislature, in the meantime engaging in an educational campaign to that end.

The topic "Bondage of Cities" was discussed by A. A. Cochran, City Solicitor, Chester. He spoke in favor of home rule, and said that an amendment to the constitution would have to be adopted before it could be brought about. The amendment should provide that cities should make their own charters, prescribe the manner of so doing and draw a distinct line between State affairs and local interests. Sewage disposal was discussed by Herbert Snow, Chief of the Sanitary Engineering Division of the State Department of Health. He argued that sewage disposal by special plants is a necessity; that it is not too expensive, and that it is the duty one community owes another. "Municipal Playgrounds" was discussed by the Rev. A. B. McCormack, who urged the construction of playgrounds by every city in the State in behalf of the poor, who are unable to go upon vacation or reach the country. City Solicitor Thomas C. Hare, Altoona, spoke on the "Municipal Regulation of Saloons with Reference to Their Being Closed During Certain Hours of the Night." He urged the passage of laws giving greater police powers in regulating the closing hours. John H. Bigelow, City Solicitor, Hazleton, suggested possible legislation to permit municipal regulation of coal mining. Earnest F. Maling, Chief Statistician of the Department of Commerce and Labor at Washington, gave suggestions for municipal accounting and handling of public funds.

Officers were elected as follows: Mayor Jacob E. Weaver, York, president; George J. Krause, Lebanon, vice-president; Fred. H. Yates, Wilkes-Barre, secretary; Jacob Craig, Chester, treasurer. Executive committee: W. S. Greevy, Altoona; F. S. Meals, Harrisburg; H. R. Hill, Williamsport.

**League of Iowa Municipalities.**—The twelfth annual convention will be held at Fort Dodge, Ia., September 21-23. The following programme will be carried out:

Tuesday, Sept. 21, 8 a. m. to 10 a. m.—Reception and registration of delegates, 10 a. m. to 12 m.; call to order, Commercial Club rooms; invocation, Rev. R. L. Breed, Pastor First Congregational Church; address of welcome, Hon. S. J. Bennett, Mayor, Fort Dodge; on behalf of Commercial Club, H. M. Pratt, Secretary; response and president's address Hon. T. J. Phillips, Mayor, Ottumwa; report of secretary-treasurer, Frank G. Pierce, Marshalltown; appointment of Auditing Committee; report of the Legislative Committee, C. F. Kimball, City Attorney, Council Bluffs; appointment of Question Box and other committees; business meeting; report of delegates; adjournment.

Afternoon, 2 p. m. to 5 p. m.—Report of Committee on Judicial Opinions, F. B. Blair, City Attorney, Manchester; discussion, paper and discussion, 40 minutes; the Law of Water Rates, B. F. Swisher, City Attorney, Waterloo; discussion, paper and dis-

cussion, 40 minutes; report of Committee on Water Rates, A. Hammond, Superintendent Water Works, Cedar Falls; discussion, paper and discussion 60 minutes; business session; report of delegates; adjournment.

Evening, 7 p. m. to 8 p. m.—Band concert, Fifty-sixth Regiment Band, City Park; 8 p. m. to 9:30 p. m., report of Committee on Street Paving, A. E. Johns, Councilman, Fort Madison; discussion, paper and discussion, 45 minutes; Problems of Special Assessments, E. L. Hirsch, City Attorney, Burlington; discussion, paper and discussion, 45 minutes; adjournment.

Wednesday, 10 a. m. to 12 m.—All delegates meet in Commercial Club rooms; report of department meetings; reports and discussion, 30 minutes; report Question Box Committee, 30 minutes; report of Committee on Sewage Disposal, John W. Budd, City Engineer, Des Moines; discussion, paper and discussion, 60 minutes; business meeting; adjournment.

Afternoon, 2 p. m. to 4:30 p. m.—Terminal Taxation of Railroads, Hon. C. G. Saunders, State Senator, Council Bluffs; Hon. W. W. Goodykoontz, member of Legislature, Boone; C. D. Huston, Commissioner, Cedar Rapids; discussion by delegates; business meeting; adjournment. 4:30 p. m.—delegates inspect shoe factory and oatmeal mill.

Evening, 8 p. m. to 10 p. m.—Report of Committee on Municipal Franchises, Hon. J. W. Hazlett, Mayor, Waverly; Publicity in Control of Public Utilities, Hon. C. H. Van Law, State Senator, Marshalltown; discussion by delegates; adjournment. 10 p. m.—Luncheon to delegates at Elks Club, by municipal officials of Fort Dodge.

Thursday, 8 a. m.—Visit gypsum mills and clay products factory. 10 a. m. to 12 m.—Report Committee on Street Lighting, Hon. W. C. Rollins, Mayor, Denison; discussion, report and discussion, 40 minutes; Municipal Control of Shade Trees, Prof. A. T. Ervin, State College, Ames; discussion, paper and discussion, 40 minutes; business meeting; adjournment.

Afternoon, 2 p. m.—Final report Question Box Committee; final report Legislative Committee; reports of all other committees; business meeting; election of officers; election place of next meeting; unfinished business; adjournment.

The local committees in charge are as follows: Entertainment—C. H. Smith, A. M. White, A. H. McCreight, J. B. Butler and C. E. Larson. Reception—D. M. Woodard, M. J. Mitchell, A. D. McQuilkin, J. F. Russell and H. M. Pratt.

The officers of the league are: President, Mayor T. J. Phillips, Ottumwa; vice-president, Hon. F. B. Ingalls, Maquoketa; secretary-treasurer, Frank G. Pierce, Marshalltown. Trustees: Hon. A. N. Alberson, Washington; Mayor O. L. Ingledue, Marshalltown, and Mayor J. A. Walter, McGregor.

**Municipal League of Niagara Falls, N. Y.**—At a meeting of the league in the City Court a committee comprising John F. McDonald, Max Amberg and Frank E. Johnson was appointed to call on Mayor A. C. Douglass and ascertain why \$39,854.04 in back taxes had not been collected. Members of the league declared that it is the duty of Corporation Counsel MacKenna to attend to the collection of these unpaid taxes.

**Anti-Tuberculosis Association of Kentucky.**—An urgent call, requesting the presence of the Mayor of every city in Kentucky, has been issued by the promoters of the Anti-Tuberculosis Conference, to be held at Lexington on September 29. The conference has been planned by the Anti-Tuberculosis Associations of Henderson, Frankfort, Latonia, Lexington, Louisville and Owensboro, and is expected to be the most important step yet taken in Kentucky in the war against the great white plague. The call is signed by Governor Augustus E. Willson, Frankfort; Mrs. James A. Leech, president Kentucky Federation of Women's Clubs; C. L. Adler, chairman Louisville Anti-Tuberculosis Association; Dr. J. N. McCormack, secretary State Board of Health, and others.



**New England Water Works Association.**—The twenty-eighth annual convention was held in New York City, September 8, 9 and 10. This was preceded by a reception given by the local members of the association at the Park Avenue Hotel, the headquarters of the convention, which took place on the afternoon and evening of the 7th.

Wednesday morning the sessions of the convention opened with an address of welcome by Mr. George S. Rice, chairman of the committee of arrangements and a New York member of the society. Sixteen applications for membership were acted upon favorably and appropriate action was taken toward the appointing of the nominating committee to select nominees for the winter election of officers.

Following the business meeting, Mr. William W. Brush, Engineer of Distribution of the Department of Water of New York City, read a paper describing the water supply systems of Greater New York. This paper could not, of course, in the limited time at the writer's command, give more than an outline of the systems now in use and those under construction. The paper was illustrated with lantern slides showing the watersheds of Manhattan and on Long Island, together with some details of the plants. Mr. James L. Tighe, City Engineer of Holyoke, Mass., read a paper entitled "Odors and Tastes in the Water Supply of Holyoke," which was largely historical, telling at some length the troubles which that city had experienced with as large and varied an assortment of algae and other vegetable growths as probably could be found in almost any reservoir system; one of these varieties, at least, has, as far as known, been found in only one other reservoir in the country. In the brief discussion of this paper, Mr. Tighe made two remarks which seemed to particularly impress his hearers. One was that, during an exceedingly unpleasant visitation of algae the reservoir was visited for about an hour by a well-known water purification expert, who was not known to have done anything more than look at the water; but on the following day the objectionable matter had almost entirely disappeared. This coincidence gave rise to several facetious remarks. The other statement was that copper sulphate had never been tried as a cure for the troubles at Holyoke, because the Massachusetts State Board of Health looked unfavorably upon this treatment, and, so far as Mr. Tighe was aware, copper sulphate had never been employed in any Massachusetts reservoir. There seemed to be some justification for the surprise expressed by many of the delegates that the use of this material, which had been attended with such beneficial results in many other States, was considered unfavorably by the Massachusetts Board. The committee appointed to prepare a standard specification for fire hydrants was down for a report, but no report was forthcoming.

The afternoon and evening of Wednesday were left open to give the members an opportunity to visit Coney Island or any other of the attractions of Greater New York.

On Thursday morning Dr. John C. Otis, of Poughkeepsie, N. Y., read a paper and presented lantern slides describing the Poughkeepsie water works. This paper also was largely historical. A large part of it was devoted to describing the water purification plant as

it was originally built (which was the first sand filtration plant in this country), and the later improvements and experiences with bleaching powder, the form of sedimentation basins, etc., were presented. These features have all been described at some length in the MUNICIPAL JOURNAL AND ENGINEER during the past two years. Dr. Otis, at the conclusion of the paper, suggested the policy of abandoning sand filtration, not only in Poughkeepsie, but in cities generally; the results obtained in his city by sedimentation, coagulation and sterilizing having so impressed him that he was ready to believe the additional sand filtration to be unnecessary. Two or three members, however, did not approve of this idea, Professor Phelps especially stating that in his opinion the public at large would not willingly consent to the addition to their water supply of any more chemical matters than were really necessary, whether or not the addition of these was in reality at all injurious or objectionable. Professor Phelps stated that he had been experimenting with other disinfectants besides bleaching powder, and had had considerable success with several peroxides, but that all of these were rather expensive. Ozone he spoke of most highly as being the ideal disinfectant, the only serious objection which he considered it to present being the expense, which he hoped perfection of the mechanical appliances would reduce to a commercial practicability.

Mr. Harvey S. Chase, of Boston, Mass., was to have read a paper entitled "Water Works Accounting"; but neither Mr. Chase nor his paper was present. The committee appointed "to look after and keep track of legislation and other matters pertaining to the conservation, development and utilization of the natural resources of the country" reported that the press, both technical and daily, had been so full during the past year of matter on this subject that the committee did not think it necessary to present any report other than to call attention to the widespread interest which was being aroused on the subject. In the afternoon a number of the delegates visited the Pennsylvania Railroad terminal and took a trip through the tunnels of the Manhattan & Hudson Railway Company from Twenty-third street to Hoboken, Jersey City and Cortlandt street, starting from the station at Twenty-third street and Sixth avenue at 2:30 o'clock. The trip occupied about two hours. In the evening Mr. Leonard Metcalf reported for the committee appointed "to collect data relating to awards that have been made for damages resulting from the diversion of water; also to consider the practicability of joint action with the National Cotton Manufacturers' Association, or other organization of mill owners, leading to the formulation of standard rules and methods of computing or assessing damages for the diversion of water," that the report of the committee would be much shorter than its name, being merely that of progress, in that circulars had been sent out asking for information, and over 100 replies had been received giving the desired information in considerable detail. Neither member of the committee "to compile information relating to awards that have been made in water works valuation cases" was present and no report was presented.

A double paper by H. W. Clark, chemist, and by Steven DeM. Gage, Biologist of the Massachusetts State

Board of Health, was read by Mr. Gage, the title being "Disinfection as an Adjunct to Water Purification." This paper gave results obtained by investigations made by these representatives of the Massachusetts State Board of Health, especially as to the use of bleaching powder, although all disinfectants known of by the investigators had been experimented with excepting ozone. One peculiarity noted in the bacterial effect of bleaching powder, and one which led to some requests for further information in the following discussion, was the fact, which appeared to be pretty well established by their experiments, that while with the use of proper amounts of bleaching powder bacilli coli were almost or entirely eliminated, the bacteria generally which developed at body temperature were not reduced more than 50 per cent, and in some cases not that much. No explanation was given or theory advanced to account for this.

Mr. Henry A. Young, who was to have read a paper entitled "Camaguey (Cuba) Water Works," was not present, and the paper was read by title only. This concluded the business sessions of the convention.

By Thursday noon there were registered 138 corporate members, 66 associate members and 92 guests, a total of 296. It is possible that, including the number present who did not take the trouble to register and the few who may have come after Thursday noon, 350 were in attendance at the convention. During the last six or eight years the attendance at the fall convention has ranged from 200 to 250, except that in 1905, when the association met in New York, there were registered about 600 members and guests. The attendance at the meetings was small, there having been about 100 present on Wednesday afternoon, about 50 on Thursday morning and about 35 that evening. A small percentage of attendance is, however, to be expected when a convention is held in a large city where there is much sightseeing to do. Most of the papers, however, contained little of real interest to water works men, and practically no discussion was raised by any points presented. In fact, there was little to discuss in any of the papers read, three of those which were read being really historical and general descriptions of water supplies of New York, Holyoke and Poughkeepsie, most of the facts concerning all of which were already pretty well known to the members. None of the three committees had any report to present.

On Friday morning, in spite of a heavy downpour, a number of the members started by train for the Ashokan reservoir of New York's Catskill water supply.

#### EXHIBIT OF APPLIANCES

A fairly good exhibition of water works appliances was given in rooms of the Park Avenue Hotel adjoining the convention hall. The exhibitors were as follows:

Hersey Manufacturing Company, of Boston; showing meters and detector meters.

Ross Valve Manufacturing Company, of Troy, N. Y.; an exhibit of valves.

Gamon Meter Company, of Newark, N. J.; a new meter known as the "Watch Dog."

Henry R. Worthington Company, of New York; water meters.

Neptune Meter Company, of New York; Trident meters.

Union Water Meter Company, of Worcester, Mass.; King and Nilo meters.

Pittsburg Meter Company, of El. Pittsburg, Pa.; water meters.

Thomson Meter Company, of Brooklyn, N. Y.; water meters.

National Meter Company, of New York; water meters.

Fairbanks Company, of New York; fire hydrants and gate valves.

Chapman Valve Manufacturing Company, of Springfield, Mass.; gate valves.

John Simmons Company, of New York; Seagrave Crescent cut-off valves.

Kennedy Valve Manufacturing Company, of Elmira, N. Y.; gate valves and fire hydrants.

Hays Manufacturing Company, of Erie, Pa.; valves and other plumbers' supplies.

A. P. Smith Manufacturing Company, of Newark, N. J.; plumbers' supplies and pipe tapping machines.

Glauber Brass Manufacturing Company, of Cleveland, O.; plumbers' goods.

H. Mueller Manufacturing Company, of Decatur, Ill.; plumbers' goods, tapping machines and improved meter tester.

National Lead Company, of New York; leadamant pipe, an alloy of lead and antimony.

Lead Lined Iron Pipe Company, of Wakefield, Mass.; samples of lead lined pipe.

East Jersey Pipe Company, of New York; sample and photographs of lock bar pipe.

New York Lead Wool Company, of New York; samples of lead wool.

National Water Main Cleaning Company, of New York; sections of choked pipe, and a full sized pipe special, designed for introducing pipe cleaners at will.

Municipal Journal and Engineer, Engineering Record, and Fire and Water Engineering each distributed copies of recent issues of their papers.

**Water Works Manufacturers' Association.**—The executive committee has made its first annual report. The officers elected for the year are: Denis F. O'Brien, president; Fred. A. Smith, vice-president; Robert E. Milligan, secretary and treasurer. All members of the association exhibiting at the Milwaukee convention were, it is stated, allowed 20 square feet of space, as provided in the by-laws, an extra charge being made to those using more. Altogether, 39 members exhibited their goods. Upon application the association was given the entertainment and exhibit privileges for the next convention of the American Water Works Association, to be held in New Orleans early in the spring of 1910. The executive committee endeavored to make arrangements with the New England Water Works Association to take charge of its convention, held in New York, September 8-10, on the same lines as the entertainment and exhibits were handled for the American Water Works Association; but owing to a feeling on the part of the New England Association that henceforth they would accept no entertainment except such as would be provided by their active members, they were unable to secure the privilege. It was thereupon decided that as they were unable to affiliate with all water works conventions, they should for the present confine their efforts to the annual convention of the American Water Works Association. The report is signed by D. F. O'Brien, president, and R. E. Milligan, secretary-treasurer.

**National Electric Light Association, New England Section.**—Members of the section met for a two days' session at Portsmouth, N. H., September 9, President S. Fred Smith, Salem, Mass., presiding. Two papers were read, one, "Advantages of Steam Heating for Electric Lighting Companies," was by Charles A. Bishop, of Boston, and the other, "Liability Insurance and How It Affects the Employee," by Walter L. Mulligan. Nearly 200 members boarded the steamer Alice Howard and took a sail on the lower harbor, after which they sailed up the river to the navy yard and went over the reservation. They then took the steamer and crossed the river to the power plant of the Rockingham County Light and Power Company, where Supt. John S. Whitaker entertained the members and guests, serving refreshments.

## Calendar of Meetings

September 14-16.

International Association of Municipal Electricians.—Annual convention, Atlantic City, N. J.—F. P. Foster, Secretary, Corning, N. Y.

September 14-17.

Michigan Gas Association.—Annual meeting, Detroit, Mich.—A. P. Ewing, Secretary, Detroit, Mich.

September 15-17.

Massachusetts State Firemen's Association.—Convention, Plymouth, Mass.—D. Arthur Burt, Secretary, Taunton, Mass.

September 21-23.

American Automobile Association.—Second Annual Good Roads Convention, Cleveland, O.—F. A. Pease, Chairman, Demonstration Committee, Cleveland, O.

September 21-24.

League of California Municipalities.—Twelfth Annual Convention, Santa Cruz, Cal.—Wm. J. Locke, Secretary, Pacific Building, San Francisco, Cal.

September 25-27.

Illuminating Engineering Society.—Annual Convention, New York, N. Y.—P. S. Millar, Secretary, 25 West 39th street, New York, N. Y.

September 29.

New Hampshire State Firemen's Association.—Convention, Woodsville, N. H.—George L. Osgood, Secretary, Concord, N. H.

September 29-30.

Ohio Fire Chiefs' Association.—Convention, Alliance, O.—D. K. Mosher, Secretary, Warren, O.

October 4-8.

American Street and Interurban Railway Association.—Annual convention, Denver, Col.—B. S. Swenson, Secretary, 29 W. 39th St., New York, N. Y.

October 7.

League of Virginia Municipalities.—Fourth annual meeting, Staunton.—J. Davis Reed, Portsmouth, President; L. C. Brinson, Portsmouth, Secretary.

October 19-22.

American Public Health Association.—Annual convention, Richmond, Va.—Charles O. Probst, Secretary, Columbus, O.

October 20.

American Gas Institute.—Annual meeting, Detroit, Mich.—A. B. Beadle, Secretary, 29 W. 39th St., New York, N. Y.

November 3.

Lakes-to-Gulf Deep Waterway Convention.—Convention, New Orleans, La.

November 9-11.

American Society of Municipal Improvements.—Annual convention, Little Rock, Ark.—A. Prescott Folwell, Secretary, 241 W. 39th St., New York, N. Y.

November 15-19.

National Municipal League.—Annual meeting, Cincinnati, O.—Clinton Rogers Woodruff, Secretary, 705 North American Building, Philadelphia, Pa.

## PERSONALS

BROADHEAD, THOMAS H., Los Angeles, Cal., who was charged with accepting bribes while Chief of Police, has been acquitted and restored to duty as Captain.

BRINKLEY, R. H., Suffolk, Va., has been elected Street Commissioner. Other officials elected are: Col. R. S. Boykin, Treasurer; William E. Brinkley, Police Chief; R. H. Morgan, Overseer of the Poor; W. T. Johnson, Clerk of the Council; Robert W. Withers, Town Attorney; Dr. D. L. Harrell, Health Commissioner; H. M. Butler, Chief of Fire Department.

BRUCE, ALEXANDER B., Lawrence, Mass., formerly Mayor, died September 7, aged 56 years.

BURGESS, PHILIP, Columbus, O.: A. Elliott Kimberly and Charles Ford Long have severed connection with the Ohio State Board of Health, and have opened offices in the Columbus Savings & Trust Building, Columbus, O., for the practice of Consulting Sanitary and Chemical Engineering, under the firm name of Burgess, Kimberly & Long. Messrs. Burgess and Kimberly have for the past three years been engaged upon special studies of the installation and operation of water and sewage purification plants, problems of water softening and industrial wastes treatment, as members of the engineering staff of the Board. Mr. Long has been engaged in conducting chemical examina-

tions in the laboratory of the Board. They have provided a well-equipped laboratory, available in connection with water and sewage propositions, as well as for industrial chemical analyses.

BURR, Mrs. MARY A., Brewer, Me., has been elected City Clerk, to succeed George W. Nickerson, who resigned after fourteen years' service; Mrs. Burr is the first woman in New England to hold such a position.

COALE, JETHRO F., Chester, Pa., President of the Common Council, has resigned.

CROWELL, THOMAS R., Lebanon, Pa., City Engineer, has been reelected.

FORD, FREDERICK L., City Engineer of Hartford, Conn., has returned from a nine-week trip in Europe, where he has been studying city planning and other matters of municipal engineering.

GOOD, JOHN W., Dayton, O., has been elected Treasurer of the Lucas Pump Company, of Dayton, O., vice R. E. De Weese, who resigned to take a trip abroad.

GROVER, WILLIAM A., Dover, N. H., has been reelected City Engineer over Paul M. Libby, of Somersworth, by Council by a vote of 18 to 7.

JOHNSON, TOM L., Cleveland, O., Mayor for three terms, has been renominated at the Democratic primary.

LEACH, Dr. A. L., Cape May, N. J., and Robert S. Hand have been reappointed members of the Board of Health.

MURRAY, JOHN F., Commissioner of Public Works of the Borough of the Bronx, New York City, has been elected Bronx President by the Aldermen representing the Borough, following the removal from office of Borough President Louis F. Haffen by Governor Hughes.

SHARP, DANIEL M., Lebanon, Pa., has been elected City Clerk, a newly created office; he has been acting as Clerk of Common Council.

WHITTLE, SAM, Murray, Utah, Chief of the Fire Department and its organizer, has resigned.

WEBSTER, MISS ALICE I., East Orange, N. J., Secretary to Mayor William Cardwell, is acting as Mayor during the absence of Mr. Cardwell.

## TRADE NOTES

**Cast Iron Pipe.**—Chicago: No transactions of importance are reported. Quotations: 4-inch, \$27.50; 6 to 12-inch, \$26.50; 16-inch and up, \$25.50. New York: The demand for small quantities is quite active. Quotations: Carload lots, 6-inch, tidewater, \$24 to \$24.50. Some manufacturers are quoting \$25.50.

**Lead.**—The market has steadied, but there is little buying. Sales of lead on the Metal Exchange floor have fallen off and the price of the American Smelting and Refining Company is being held firm at 4.40c., while some outside sellers are demanding 4.45c. The London market is slightly stronger than last week, and lead there is bringing about 1s. more than at the time of our last report, the price there being £12 13s. 9d.

**Electric Fire Pump.**—A new electric fire pump for the town of Waidhofen-on-Ips, built by the manager of the municipal electric station, is designed to throw more than 100 gallons of water through two lines of hose at a distance of 125 feet. The pump, motor and accessories are mounted on a four-wheel horse-drawn car, and room is provided for seating four men in front and giving standing space to three in the rear. A 10-horsepower, 150-volt, three-phase motor drives the pump. The motor, on reaching a fire, is connected to the electric mains by plug





DUMP CART—LOADING POSITION

contacts or by hook couplings, and, as several hundred yards of cable can be carried, the pump can be operated in almost any place desired. In a recent test a stream was being thrown to a height of 60 yards in a minute and a half after arrival. The advantages claimed include increased rapidity in getting into working order, reduced first cost, weight and space requirement, increased simplicity and safety in operation, and reduction in wear, tear and cost of operation. For a fire extinguisher for factories, theaters, farms, etc., the same type of engine will be mounted on a two-wheeled barrow.

**Blueprinting.**—The Keuffel & Esser Company, 127 Fulton street, New York, N. Y., furnishes blueprint papers as follows: "Regular," requiring from four to eight minutes' exposure in bright sunlight. This will be found the most satisfactory in keeping, handling and in regard to quality and appearance of prints. "Quick," intended for use where prints are required quickly, or where no good light is available. Quick papers require more careful keeping and protection from light before exposure than the regular. "Electric Quick," for use with electric light and in electric printing machines. When blueprint paper is required for printing from negatives (blue prints on white ground) it is requested that this be stated in the order. The firm can furnish also paper of other speeds to meet unusual conditions, but in such cases the exact conditions should be explained in the order, to obtain the best possible results. To insure the best results from blueprint papers and cloths, the order should state the desired speed, whether they are intended for sunlight or electric light exposure.

**Lock Snap.**—The Walsh Safety Lock Snap Company, 65 Newberry Building, Detroit, Mich., manufactures a lock snap much used by Fire Departments. It locks instantly, is operated with one hand, and stays locked until opened.



DUMP CART—UNLOADING POSITION

## MUNICIPAL APPLIANCES

### Pick-up Machine, Sweeper and Cart

THE Combined Sanitary Street Cleaner herewith illustrated is designed to overcome the objectionable features of the old-style side delivery sweepers which have been in use for many years, and is made by the Briggs Labor Saving Specialty Co., of Waterloo, Ia. The machine combines the sprinkling, sweeping and picking up in one operation. It is operated by one man with a three-horse team.

The machine is equipped with a 300-gallon water tank, as only enough water is discharged to prevent the dust from blowing during the operation of sweeping, the water striking the pavement at an angle directly ahead of the receptacle into which the sweepings are thrown by the broom. The length of the broom is 7 feet, and sweeps directly ahead, instead of at an angle, and as the working parts are all hooded in, the objection from dust is entirely overcome.



COMBINED SPRINKLING, SWEEPING AND PICKING-UP MACHINE

The broom throws the dirt into a receptacle or dirt pan, in which is an 18-inch helicoid conveyor, which is thrown into action when the receptacle is filled and discharges the sweepings to the right side of the machine in a windrow about 30 feet in length, the pan being raised during this operation. While the pan is raised the sweepings are thrown ahead under it, and are thrown into the pan when the load has been discharged and the receptacle again dropped into position.

Directly back of the broom is an auxiliary dust pan into which are received the sweepings which may be thrown over, so that the street is left in a very clean condition after the operation. The right end of the broom extends to the line of the rear wheel, so that the street is cleaned to within 5 inches of the curb, where only the natural accumulation of dirt is left. This narrow strip can be pushed into small piles with a hand broom.

The working parts of the machine are operated by foot pedals entirely, except the valves controlling the water and the clutch controlling the broom. The capacity of this machine is from 6,000 to 7,000 square yards of surface per hour. It requires but about 1,500 gallons of water for an entire day's run. Roller bearings are used wherever the friction is sufficient to make them desirable. The machine is constructed entirely of steel.

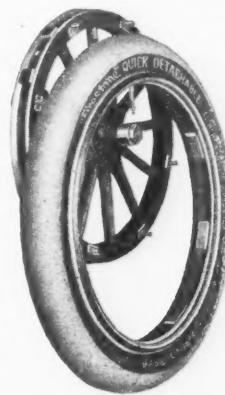
To make the street cleaning outfit complete, the manufacturers of this machine also make a water-tight tip-over dump cart, which is here illustrated. This cart consists of a drum of 40 inches in diameter and 48 inches in length, hung at its center between wheels 60 inches in diam-

eter, so that a clearance of 10 inches enables the cart to be used on uneven surfaces. When the drum is to be filled the cover, which is hung on the axle, is thrown ahead under the seat, leaving an opening of about 18 inches for the reception of material. A chain is attached at the top of cart, as shown in illustration, and extends under the body, and when the load is to be discharged the driver winds the chain over a drum by means of a foot pedal, tilting the body of the cart and dumping the load without dismounting.

The cart, being water-tight, can be used for garbage and ashes, as well as for street cleaning, and when the cover is closed all objectionable odors are prevented from escaping and the wind prevented from blowing ashes over the street. The weight of the cart complete is about 1,250 pounds. The body, being hung at its center on the axle, does not change its center of gravity in going up and down hill, as is the case with the old style dump cart, all of which is above the axle,

### New Tire for Auto Apparatus

ONE of the latest devices for preventing delays in reaching fires is the 1910 Firestone Demountable Rim for use in connection with pneumatic tires on motor-driven apparatus. This equipment enables the driver overtaken by tire troubles to make an instant change of tires without having to repair or even pump up his tires. A tire already inflated is carried on a spare rim on the side of the car. When the inevitable puncture or blow-out happens, the damaged tire and its rim may be quickly unfastened, the spare tire and rim then substituted and the journey immediately resumed. Minutes count in making a quick run to a fire, and the 1910 Firestone Demountable Rim is a great time-saver when time is most valuable. This rim may be used



DEMOUNTABLE RIM

in connection with any clincher or quick detachable tires, but is especially recommended with the latter, owing to their greater security and the ease with which a quick detachable tire may be fitted to the spare detached rim. Literature describing this rim is being furnished upon request by the Firestone Tire and Rubber Company, Akron, O.

## THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

## BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>STREET IMPROVEMENTS</b>				
Indiana.....	Indianapolis.....	Sept. 17, 11 a.m.....	Bldg. parkway and blvd. along north bank of Fall Creek.....	Board of Park Commissioners.
New York.....	L. I. City, N. Y.....	Sept. 17, 11 a.m.....	Regulating, grading and paving various sts.; also furnishing granite paving block.....	Lawrence Gresser, Boro. President.
Wisconsin.....	Janesville.....	Sept. 17, 2 p.m.....	Brick or cement curb and gutter, etc., several streets.....	W. F. Carle, Chm. St. Assess. Com.
Ohio.....	Cincinnati.....	Sept. 17, noon.....	Improving two roads in Symmes township.....	Fred Dreihls, Clerk.
Ohio.....	Bellaire.....	Sept. 17.....	Paving Bellaire and Shadyside pike.....	County Commissioners.
Ohio.....	Bellefontaine.....	Sept. 17.....	Brick paving 6,700 sq. yds., So. Detroit st.; cost, \$16,000.....	Clair A. Inskeep, City Engineer.
Ohio.....	Coshocton.....	Sept. 17.....	Laying creos. wood floor on 340-ft. bridge, inc. 720 sq. yds. creos. block, 30,600 ft. creos. timber, 9,500 lbs. steel.....	C. R. Randles, County Auditor.
Illinois.....	Chicago.....	Sept. 18.....	Paving with No. 2 granite block portion of 2 streets.....	John J. Hanberg, Comr. Pub. Wks.
Ohio.....	Cleveland.....	Sept. 18, 11 a.m.....	Grading, draining and improving N. Woodland road.....	A. B. Lea, County Surveyor.
Kansas.....	Olathe.....	Sept. 18, noon.....	Macadamizing 2 wagon roads, 18 miles long.....	J. T. Kincaid, County Clerk.
Minnesota.....	White Bear Lake.....	Sept. 20, 10 a.m.....	Improving Lake avenue.....	E. G. Krahmer, Co. Aud., St. Paul.
Illinois.....	Cairo.....	Sept. 20, 2 p.m.....	Brick pavement, cement filler, Walnut st., 29,569 sq. yds.; Elm st., 4,732 sq. yds.; 21st st., 10,872 sq. yds.....	W. B. Thistlewood, City Engineer.
West Virginia.....	Huntington.....	Sept. 20, 2 p.m.....	Paving with brick and concrete.....	St. J. Coon, Commissioner.
New Jersey.....	Newton.....	Sept. 20.....	Macadamizing six miles in Hardyston.....	A. H. Konkle, County Engineer.
Florida.....	Ft. Dade.....	Sept. 20.....	Constructing 4,150 sq. ft. granolithic walks.....	Constructing Quartermaster.
Iowa.....	Creston.....	Sept. 20.....	Paving, curbing, etc., 2 streets.....	J. F. Golden, City Clerk.
Wisconsin.....	Janesville.....	Sept. 20, 2 p.m.....	Macadamizing, 6,151 sq. yds.; grade cement curb and gutter.....	C. V. Kerch, City Engineer.
New York.....	New York.....	Sept. 20.....	Repaving with asphalt block, 40,200 sq. yds., 4 streets.....	John F. Ahearn, Boro. President.
New Jersey.....	Bayonne.....	Sept. 21, 8 p.m.....	Brick paving 8,900 sq. yds., 25th st. from Broadway to Bay.....	W. C. Hamilton, City Clerk.
Oklahoma.....	McAlester.....	Sept. 21, 7:30 p.m.....	Vit. brick pavement on cement; concrete curb and gutter.....	J. Phelan, City Engineer.
New Jersey.....	Hoboken.....	Sept. 22, 4 p.m.....	Brick paving on concrete, 2 blocks, wood block around schools.....	James H. Londrigan, City Clerk.
Georgia.....	Fort Oglethorpe.....	Sept. 22.....	Constructing 12,300 sq. ft. cement walks.....	Capt. Jos. F. Gohn, Q.M.
New York.....	Brooklyn.....	Sept. 22, 11 a.m.....	Asphalt paving, 33,920 sq. yds.; 7 sts.; 5 yr. guar.; asphalt block repaving, 9,570 sq. yds. on 10th st., 5-yr. guarantee.....	Bird S. Coler, Boro. President.
Ohio.....	Cincinnati.....	Sept. 24, noon.....	Improving three roads.....	Fred. Dreihls, Clk. Co. Com.
Utah.....	Salt Lake City.....	Sept. 24.....	Grading, curbing, paving Third West street.....	L. C. Kelsey, City Engineer.
Illinois.....	Grand Ridge.....	Sept. 25, 3 p.m.....	Graveling 320 rods on two roads for Farm Ridge.....	D. J. O'Mara, Chm. Hwy. Comrs.
Washington.....	Vancouver.....	Sept. 28, 11 a.m.....	Bldg. 8,100 ft. of Reserve st., inc. drains, etc.....	Constr. Q. M., Vanc. Barracks.
New Jersey.....	Paterson.....	Sept. 29.....	Macadamizing a portion of Union avenue.....	W. S. Cox, Chm., Bd. Freeholders.
Mississippi.....	Meridian.....	Sept. 30.....	Paving 112,000 sq. yds., any hard material, and 17,000 lin. ft. concrete or granite curb on 5 avenues and 4 streets.....	C. W. O'Leary, City Clerk.
Alabama.....	Huntsville.....	Oct. 5, noon.....	Paving 40,000 sq. yds.; curb and gutter 14,000 ft., Holmes st.....	Thomas W. Smith, Mayor.
Ohio.....	Corlett.....	Oct. 6, noon.....	Grading, draining, curbing, paving 2 streets, 1 avenue.....	W. H. Jantzen, Village Clerk.
<b>SEWERAGE</b>				
New York.....	L. I. City, N. Y.....	Sept. 17, 11 a.m.....	Constructing sewers in various streets in Queens Borough.....	Lawrence Gresser, Boro. President.
Kentucky.....	Louisville.....	Sept. 17, noon.....	Bldg. part section D, southern outfall sewer, contract No. 56.....	W. C. Nones, Chm. Sewer Comm.
Indiana.....	Angola.....	Sept. 17, 6 p.m.....	Constructing laterals to new main trunk sewer.....	Roy Hirst, City Clerk.
Pennsylvania.....	Wernersville.....	Sept. 20, noon.....	Bldg. sewage disposal plant, etc.; 900 cu. yds. concrete, part reinforced; 50 tons c. i. pipe and specials; 4,000 ft. sewer pipe, etc. at State Asylum for Insane.....	Henry M. Dechert, Pres. Bd. Trus.
Alabama.....	Ft. Morgan.....	Sept. 20.....	Constructing pipe sewers and iron outfall.....	Capt. H. B. Chamberlain, Q. M.
Wisconsin.....	Janesville.....	Sept. 20, 2 p.m.....	Sewer work; Dist. 10, 1,284 ft. 8-in. sewer, etc.; No. 11, 528 ft. 8-in.; No. 14, 750 ft. 15-in.; 900 ft. 15-in.; 1,911 ft. 8-in. sewer, 10 manholes, etc.....	W. F. Carle, Chm. St. Assess. Com.
Wisconsin.....	Oshkosh.....	Sept. 20, 2 p.m.....	Constructing a sewer in River street.....	J. E. Mallery, Chm. Bd. Pub. Wks.
Iowa.....	Clinton.....	Sept. 21.....	Constructing sewers in Fourth avenue and an alley.....	City Council.
New Jersey.....	Bayonne.....	Sept. 21, 8 p.m.....	Bldg. 3,600 ft. 12-30-in. pipe sewer, etc. in 3 streets.....	W. C. Hamilton, City Clerk.
New Jersey.....	West Orange.....	Sept. 21, 8 p.m.....	Bldg. storm drainage along Franklin avenue.....	Joseph McDonough, Town Clerk.
New Jersey.....	Camden.....	Sept. 21, 8 p.m.....	Constructing sewers in York, Morse and Florence streets.....	Edw. Francis, Chm. Com.Sts.&Hwys
New Jersey.....	Bordentown.....	Sept. 23, 8 p.m.....	Bldg. sewer system and disposal plant; 9 miles, 8 to 15-in. pipe sewer in 2 sections; sand filters, sludge and flood basins, rein. conc. chambers and contact beds; W.W. Young, Consult. Engr.	Stanley Wampole, Sec'y Sewer Bd.
Kentucky.....	Louisville.....	Sept. 24, noon.....	Constructing sections B1, B2, C and D of northwestern sewer.....	W. C. Nones, Chm. Sewerage Comm.
New York.....	Batavia.....	Sept. 25, 10 a.m.....	Bldg. sewer system; Cont. 1, 30 miles sanitary sewer, etc.; No. 2, 4,200 ft. 16-in. c. i. force main; No. 3, pumping well and fittings; No. 4, 4,000 ft. storm water and effluent sewer; No. 5, extending municipal bldg.; also 100 h.p. Corliss engine; 250 h.p. Scotch marine boiler; 3 centrifugal pumps and sundries; Chas. Hoopes, Res. Engr.....	Board of Sewer Commissioners.
Dist. Columbia.....	Washington.....	Sept. 27, noon.....	Constructing sewers.....	Chief Clerk, D. C. Engr. Dept.
New York.....	Kingston.....	Sept. 28, 11 a.m.....	Bldg. portion of intercepting sewer; 1,300 ft., 24-in. vit. pipe and driving 6,200 ft. of tunnel in earth and rock.....	J. A. Bensel, Pres. Bd. W.S., N. Y. City
California.....	Porterville.....	Sept. 29.....	Bldg. main trunk line sewer; cost, \$35,000.....	Wm. B. Phillips, City Engineer.
<b>WATER SUPPLY</b>				
Virginia.....	Nat'l Sold. Home.....	Sept. 18, 1:30 p.m.....	Connecting water system to new power house, etc.....	John T. Hume, Treas. Sold. Home.
South Dakota.....	Weaver.....	Sept. 20.....	Bldg. 3,000 ft. 6-in. water mains with hydrants.....	H. D. James, Mayor.
New Jersey.....	Lodi.....	Sept. 20, 8 p.m.....	Furn. and install 37,300 ft. 6 and 4-in. c. i. pipe; 5,500 ft. 8, 10 and 18-in. c. i. pipe; 87 fire hydrants; 170 gate valves; 50 x 100 ft. 500,000-gal. rein. concrete covered reservoir; 300 ft. 12-in. well, pumping station, pumps, engines, etc.....	Adrian Zandee, Mayor.
Pennsylvania.....	Bradford.....	Sept. 20, 5 p.m.....	Enlarging reservoir by raising 20 ft.; excav. 30,000 cu. yds.; stone masonry, 4,500 yds.; concrete masonry, 500 yds.; rip-rap paving, 4,000 sq. yds.; gate houses, piping, etc.....	Board of Water Commissioners.
Oklahoma.....	McAlester.....	Sept. 21, 8 p.m.....	Furn. material and repairing dam with interlocking steel pipes, 28 ft. long (37,187 lbs. per ft.), width 50 ft. in earthen dam; estimate, \$2,399.50.....	J. M. Gannaway, City Clerk.
Colorado.....	Ft. Logan.....	Sept. 22.....	Remodeling pumping plant, steam or electricity.....	Constructing Quartermaster.
Pennsylvania.....	Spring City.....	Sept. 22.....	Bldg. reservoir, excavating, grading, and filling, etc.....	Bd. Trus. East. Pa. State Inst.
Saskatchewan.....	Saskatoon.....	Sept. 22, 5 p.m.....	Centrifugal pump, furn. and laying pipe, c. i. manholes, vit. pipe for drains, etc., with \$70,000 subway.....	G. T. Clark, City Engineer.
New York.....	New York.....	Sept. 22, 11 a.m.....	Furn. and install two 12,500,000-gal. steam turbo-turbine pumps; two 225 h.p. water-tube boilers, etc., at Jerome avenue pumping station, Bronx.....	J. A. Bensel, Pres. Bd. Wtr. Supply.
New York.....	Painted Post.....	Sept. 23, 7:30 p.m.....	Bldg. w. w. system, piping system, reservoir, pumping station, equipment, or any portion; cost, \$25,000.....	Knight & Hopkins, Engrs., Rome.
Louisiana.....	New Orleans.....	Sept. 25, 11 a.m.....	Constructing 50,000 and 20,000-gal. water tanks.....	Bureau of Yards and Docks, Navy Dept., Washington, D. C.
Kentucky.....	Madisonville.....	Sept. 30.....	For water works franchise.....	James L. Brown, City Clerk.



## BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
WATER SUPPLY—Continued				
Illinois.....	Rock Island.....	Sept. 30.....	Bldg. new filter plant on bluff site.....	M. T. Rudgren, City Clerk.
Oregon.....	Portland.....	Oct. 4.....	Bldg. 2 reservoirs, cost, \$618,000; cap. 125,000,000 gals.....	D. D. Clark, Engr., Water Board.
Georgia.....	Marietta.....	Oct. 5, 8 p.m.....	Constructing water works, 1,400 tons 4 to 14-in. c. i. pipe, 67 valves, boxes, etc.; 122 hydrants; rein. concrete or steel stand pipe, 40 ft. diam., 50 ft. high; 1,000,000-gal. comp. pump; engine; 1,500,000-gal. 2-stage cent. pump with 100 h.p. motor; 1,000,000-gal. cent. pump with 75 h.p. motor, 150 k.w. generator, etc.; two 500,000-gal. rein. concrete filters; rein. concrete clear basin and coagulating basin; 2,000,000-gal. storage basin; small concrete and earth dam, etc.; J. B. McCrary & Co., Engrs., Candler Bldg., Atlanta.....	Board of Water Commissioners. Jos. Oliver, Mayor. J. A. Crowell, Clk. Trus. Pub. Affrs.
Ontario.....	Toronto.....	Oct. 5, noon.....	Furnishing 1,080 lengths 16-in. c. i. pipe; also 16-in. valves.....	Joseph Oliver, Mayor.
Ohio.....	Bradford.....	Oct. 6.....	Furnishing material and constructing water works.....	
Ontario.....	Toronto.....	Oct. 28, noon.....	Furn. turbine pumps; four 13,500,000-gal. 100 lbs. pressure; two 5,000,000-gal. 300 lbs.; two 10,000,000-gal. 65 lbs. and two 110 lbs.; two 6,500,000-gal., 90 lbs. and two 160 lbs.; two 1,500,000-gal. 65 lbs. and two 110 lbs. pres.; also valves, piping, bed-plates, couplings, etc.....	
Wyoming.....	Casper.....	Oct. 28, 2 p.m.....	Bldg. Pathfinder dike, 45 miles s.w.; 160,000 cu. yds. excav.; 8,000 cu. yds. pavement; 2,000 cu. yds. concrete masonry.....	U. S. Reclam. Serv., Denver, Col.
BRIDGES				
Pennsylvania.....	Chambersburg.....	Sept. 17, 11 a.m.....	Bldg. rein. concrete bridge, 60 ft. clear span, 14 ft. roadway.....	E. K. Raff, Clk. County Comrs.
Pennsylvania.....	Reading.....	Sept. 17, 10 a.m.....	Furn. structural iron and lumber for repairing bridge.....	Board of County Commissioners.
Ohio.....	West Union.....	Sept. 17, noon.....	Bldg. 40 ft. span, 16 ft. roadway, also substructure.....	S. S. Jones, County Auditor.
Virginia.....	Independence.....	Sept. 18.....	Bldg. 2 bridges over Fox Creek, Grayson Co., 100 and 70 ft. long	P. St. J. Wilson, Hwy. Com., Rehmd.
Ohio.....	Toledo.....	Sept. 18.....	Constructing automatic swing bridge, 14 ft. wide with piers and abutments.....	D. T. Davies, Jr., County Auditor.
Michigan.....	Grand Ledge.....	Sept. 20.....	Bldg. 3-span rein. concrete bridge over Grand river; \$33,000.....	F. B. Whipple, City Clerk.
Washington.....	Everett.....	Sept. 20.....	Bldg. 2 steel bridges over Stillaguamish river.....	Board of County Commissioners.
California.....	Merced.....	Sept. 21, 10 a.m.....	Constructing steel bridge over Merced river.....	P. J. Thornton, Clk. Bd. Co. Superv.
Oregon.....	Umatilla Res.....	Sept. 23, 2 p.m.....	Constructing bridge on reservation.....	E. L. Swartzlander, Supt.
Ohio.....	Cincinnati.....	Sept. 24.....	Constructing bridges and culverts.....	Fred. Dreihls, Clk. County Comrs.
Virginia.....	Princess Anne.....	Sept. 27.....	Bldg. bridge over Blackwater river.....	A. E. Kellam, Clk. Bd. Co. Superv.
Ohio.....	Hamilton.....	Sept. 28, 10 a.m.....	Bldg. sub. and superstructure, Brown's River, Madison twp.....	J. E. Brate, County Auditor.
Pennsylvania.....	Reading.....	Sept. 29.....	Bldg. superstructure of one span steel girder bridge with rein. concrete floor and macadam roadway, etc.....	A. L. Rhoads, County Clerk.
Ontario.....	Toronto.....	Oct. 4.....	Constructing superstructure, 117-ft. arch, two 67-ft. girder spans, two 50-ft. deck girder spans; weight, 500 tons.....	Jos. Oliver, Mayor.
Louisiana.....	Tallulah.....	Nov. 3.....	Bldg. bridge over Roundaway Bay; 140 ft. long, 16 ft. wide, with 10 ft. span; approaches to be filled.....	A. L. Slack, Sec'y Police Jury.
LIGHTING AND POWER				
Pennsylvania.....	Mercer.....	Sept. 18, noon.....	Constructing power house for Mercer County.....	J. E. Callahan, Chm. Co. Comrs.
Washington.....	Tacoma.....	Sept. 18.....	Furn. 750 k.w., 25,000-50,000, 3-phase; also 2,300, 2-phase transformers.....	H. J. McGregor, Comr. Pub. Wks.
New Jersey.....	Orange.....	Sept. 20, 8 p.m.....	Bldg. municipal electric light plant, inc. two 160 kw. generators; 13-section switchboard, condenser, steam piping, 365 magnetite lamps, 65 60-watt Tungstens; alternate bids; underground, \$76,000; overhead, \$65,000; Runyon & Carey, Consulting Engineers.....	Arthur B. Seymour, Mayor. W. E. Underkofler, City Clerk.
Nebraska.....	Fairfield.....	Sept. 21.....	Constructing water works and electric lighting plant.....	W. H. Brockway, Clk. Vil. Trus. W. B. Hamilton, Clk. Supervisor. Board of Supervisors. Capt. W. C. Metcalf, Q. M.
New York.....	Clinton.....	Sept. 21.....	Electric current for 27 2,000-c.p. arc lights all-night service and ten 32-c.p. series incandescent lights.....	
California.....	Sacramento.....	Sept. 22.....	Franchise for supplying gas.....	
California.....	Oakland.....	Sept. 23.....	Installing 136 lights in Fruitvale Lighting District.....	Street and Sewer Directors. John C. Short, City Clerk.
Rhode Island.....	Ft. Adams.....	Sept. 28, 10 a.m.....	Remodeling electric lighting system.....	
Delaware.....	Wilmington.....	Oct. 5.....	Furnishing electric lighting, 2 and 3-yr. terms from April 1, 1910; not less than 300 arc and 425 incandescent lights.....	
Indiana.....	New Albany.....	Oct. 20.....	Lighting streets and alleys by electricity for 10 years from Sept. 1, 1910; \$10,000 check with each bid.....	C. H. Rust, City Engineer.
Ontario.....	Toronto.....	Oct. 28, noon.....	Furn. four 1,500 four 500 and two 225 h.p. synchronous motors; also two 1,500 and four 500 h.p. induction motors, with exciters, switchboards, connecting material, etc.....	
MISCELLANEOUS				
Wisconsin.....	Kenosha.....	Sept. 19.....	Furnish plans for city hall.....	Committee on Buildings.
Ohio.....	Cincinnati.....	Sept. 20, 2 p.m.....	Installing operating machinery at dam.....	Col. W. T. Russell, U. S. A.
Ohio.....	Upper Sandusky.....	Sept. 21, noon.....	Constructing retaining wall in Eden township.....	J. N. Traxler, County Auditor.
Saskatchewan.....	Saskatoon.....	Sept. 22.....	Constructing subway under railroad; cost, \$70,000.....	G. T. Clark, City Engineer.
New York.....	Buffalo.....	Sept. 24, 11 a.m.....	Bldg. 2-story frame bunk house for fireboat crew; also 2-room portable school house.....	F. G. Ward, Comr. Pub. Wks.
New York.....	White Plains.....	Sept. 24.....	Bldg. fire houses for Chatterton and South Side Hose Companies	Pres. Barnum, Bd. Town Trus.
Kansas.....	Hutchinson.....	Sept. 24, 3 p.m.....	Sprinkling First ave., east; also Fourth ave. west, for 1 year.....	Ed. Metz., City Clerk.
Kentucky.....	Guthrie.....	Oct. 1.....	Furn. and erecting 15-ton ice plant for Todd Co. Ice and El. Co.....	L. M. Balee, Sec'y Ice & Light Co.
Texas.....	Dickens.....	Oct. 1, 10 a.m.....	Erecting new county jail from bidder's plans.....	W. C. Ballard, County Judge.
New York.....	Albany.....	Oct. 5, noon.....	Bldg. 10.32 miles Erie Canal, Cont. 43; also Cont. 2-E.....	F. C. Stevens, Supt. Pub. Wks.
West Virginia.....	Elkins.....	Oct. 12.....	Competitive plans, etc., for new \$30,000 jail building to house 48 persons; also jailer's residence.....	S. A. Rowan, Clerk, County Court.

## STREET IMPROVEMENTS

**Anniston, Ala.**—Council has ordered paving of four streets.

**Dadeville, Ala.**—Mayor and Council have visited Birmingham to inspect method of street paving which they will introduce in this city.

**Ensley, Ala.**—Street Committee has recommended purchase of gasoline street roller, grader, sprinkler and four dump wagons; cost, nearly \$4,000.

**Ensley, Ala.**—Council is considering laying of sidewalks and curbing in Fairview and other parts of city; cost \$10,000.

**Tuscaloosa, Ala.**—City will grade, curb and pave 8th st.—D. B. Robertson, City Clerk.

**Berkeley, Cal.**—City Engineer J. J. Jessup has approved plans for widening Allston way from Dana st. to Telegraph ave.

**Kenneth, Cal.**—Construction of road between this city and Redding is being considered.

**Pasadena, Cal.**—Council is considering resolution to readvertise for street work on streets in southeast portion of city.

**Colorado Springs, Col.**—Mayor Avery is urging street paving.

**Bridgeport, Conn.**—Council has adopted recommendations for paving Fairfield ave. and continuing Main st.

**Georgetown, Del.**—Sussex County Commissioners will build gravel road from Milton to Lewes.

**St. Petersburg, Fla.**—Council has ordered laying of 18,000 ft. of sidewalk.

**Fort Pierce, Fla.**—Citizens will soon vote on \$10,000 bonds for streets.

**Bloomington, Ill.**—City Engineer Folsom has estimated cost of paving West Jefferson st. with brick at \$12,000.

**Chicago Heights, Ill.**—Council has passed ordinance to pave Lowe ave.

**East Moline, Ill.**—Plans are being prepared by Engineer H. G. Paddock, 415 16th st., Moline, for 25,000 yds of brick paving with concrete foundation.

**Elgin, Ill.**—Bids have been rejected for the construction of Tarvia macadam pavements on two streets; Council has passed ordinance for cement walk on N. State st.—C. E. Plum, City Engineer.

**Homer, Ill.**—Council has passed ordinance providing for paving 1st st. with brick.

**Joliet, Ill.**—City is considering paving of Jackson and Collins sts.

**Lanark, Ill.**—Citizens will vote on \$8,000 bonds for building sidewalks.

**Peoria, Ill.**—City Engineer Clay Belsley has estimated cost of resurfacing streets as follows: Hamilton st., \$16,813; 7th st., \$17,744; and Jefferson ave., \$42,454.

**Streator, Ill.**—Board of Local Improvements is considering paving of Illinois st.; distance five blocks.

**Waukegan, Ill.**—Council has passed ordinance for cement sidewalks on portions of two streets.—H. Thacker, City Clerk.

**Indianapolis, Ind.**—Board of Works has confirmed seven improvement resolutions.

**South Bend, Ind.**—Board of Public Works has adopted thirteen improvement resolutions.

**Des Moines, Ia.**—City has rejected bids for paving 3d st.

**Ottumwa, Ia.**—Council has passed resolutions providing for paving of several streets and alleys.

**Baton Rouge, La.**—Work of making survey of streets to be repaved has been completed.

**Gretna, La.**—Jefferson Parish Police Jury

has voted to appropriate \$80,000 for road construction.—F. L. St. Martin, President.

**New Orleans, La.**—Citizens are urging repaving of lake side of St. Charles ave. with bitulithic.

**Cumberland, Md.**—City is considering paving of Paca and South Lee sts.

**Elkton, Md.**—Cecil County Commissioners and Auxiliary Road Commission will improve road from Calvert to Bayview; distance 2½ miles; also road from Cecilton to Earleville.

**Boston, Mass.**—Mayor Hibbard has approved laying out and construction of Opera place.

**Malden, Mass.**—Street and Water Commission has ordered sidewalks on six streets.

**Duluth, Minn.**—Town of Ault has issued \$6,000 bonds for road improvement.

**Hallock, Minn.**—County Board has ordered construction of proposed road.

**Minneapolis, Minn.**—City Engineer has estimated cost of city's share of street improvement for 1910 as follows; \$105,000 for paving, \$11,000 for curbing and \$63,000 for sewers.

**Pine River, Minn.**—City will build additional cement sidewalks this year.

**Vicksburg, Miss.**—City officials have visited Mobile, Ala., to inspect paved streets.

**St. Joseph, Mo.**—Council is considering paving of Highland ave. with Hassam, Calhoun st. with rubber asphalt and Francis st. with brick.

**Lincoln, Neb.**—Council will consider paving with brick or asphalt ten streets.

**Bogota, N. J.**—Borough is considering construction of cement sidewalks in various streets.—Harlan P. Ross, Clerk.

**East Orange, N. J.**—East Orange and Ampere Land Co. is considering paving of streets in 140 acres being developed by company.

**Harrison, N. J.**—Town will pave New st. with Hassam pavement.—B. Kremer, City Engineer.

**Margate, N. J.**—Council has authorized \$75,000 to extend Boardwalk entire length of city.

**Morristown, N. J.**—Town is considering abolishment of grade crossings at Morris st.; cost to town, \$25,000.

**Newark, N. J.**—Board of Public Works will soon receive bids for paving with brick three streets.

**Paterson, N. J.**—Board of Works has ordered curbing and guttering of portions of eight thoroughfares.—J. T. Brett, City Street Commissioner.

**Trenton, N. J.**—Council is considering paving of three streets.

**Williamstown, N. J.**—Township Committee has passed ordinance requiring paving and curbing of principal street.

**Buffalo, N. Y.**—County Supervisors have approved plans for improvement of White's Corners and Orchard Park road with brick; Buffalo-Hamburg road will be improved at cost of \$104,000.

**Geneva, N. Y.**—Board of Public Works is considering paving of Yates and North Genesee sts.

**Middletown, N. Y.**—Council has adopted resolution for paving portion of North st.; City Engineer will make all necessary maps, profiles and drawings.

**Scotia, N. Y.**—Street Committee will purchase 150 yds. of crushed stone to be placed on dyke.

**White Plains, N. Y.**—Bids will be received for sidewalk on Chestnut Hill ave.

**Alliance, O.**—Board of Service has asked Council to pass the necessary legislation for the sale of \$10,000 bonds for opening West Broadway.

**Alliance, O.**—Citizens have voted \$13,000 bonds for repaving Main st.—C. E. Swearingen can be addressed.

**Canton, O.**—Stark County Commissioners will advertise for bids for paving about 1½ miles of the Brookfield road.

**Carrollton, O.**—State Highway Department did not receive any bids for constructing infirmary road in Carroll county.—Jas. C. Wonders, State Highway Commissioner, Columbus.

**Cincinnati, O.**—City Engineer J. H. Sundmaker has estimated cost of improving Beechmont ave. at \$9,480.

**Elyria, O.**—City is considering paving roadway of East Side bridge with brick and paving or resurfacing Cheapside st. with asphalt block.

**Hamilton, O.**—City is considering widening of Puthoff st.—C. L. Holdefer, Clerk Council.

**Mansfield, O.**—City will improve Buffalo st. by grading.—W. S. Bradford, Clerk of Council.

**Millersburg, O.**—State Highway Department, Columbus, did not receive any bids for constructing Millersburg and Nashville road in Holmes county; new bids will be received soon.—Jas. C. Wonders, State Highway Commissioner.

**Oakleigh, O.**—City has awarded \$5,500 street improvement bonds to Seasongood & Mayer at \$311.55 premium.

**Sebring, O.**—Council has decided to pave 15th st., Maryland ave. and 17th st.

**Toledo, O.**—Barto, Scott & Co., Columbus, have secured the \$22,340 Trilby road bond issue at premium of \$437.50; \$6,890 Reynolds road bonds have been sold to Union Savings Bank for premium of \$151.50.

**Woodfield, O.**—State Highway Department did not receive any bids for constructing Woodfield Western Road in Monroe county; new bids will be received soon.—Jas. C. Wonders, State Highway Commissioner.

**Youngstown, O.**—Board of Public Service has rejected all bids for paving Emerson Place and will readvertise.

**Grants Pass, Ore.**—Town will improve number of streets.

**Portland, Ore.**—Plans, specifications and estimates for improvement of Westmoreland district on Milwaukee road, in South-eastern Portland, have been filed by City Engineer Morris; tract owned by the Ladd estate is about three-quarters by one-half mile in dimensions and the present improvements consist of grading, cement sidewalks and curbs, at a cost of approximately \$70,000.

**The Dalles, Ore.**—Council has ordered paving of 2d st. with bitulithic; cost \$41,398.

**Woodburn, Ore.**—City will pave Front st. with bitulithic and concrete curb; cost about \$32,000.—W. J. Knox, City Engineer.

**Butler, Pa.**—Council is considering paving of Lookout ave.

**Connellsville, Pa.**—Street Committee will advertise for bids for laying cement and stone walks.

**Harrisburg, Pa.**—City will let contract next spring to keep all asphalt streets in repair for a period of three years.—M. B. Cowden, City Engineer.

**New Brighton, Pa.**—Borough has ordered paving of Penn and 8th aves.

**Pittsburg, Pa.**—All bids have been rejected for improving two public highways and new bids will be received.—Geo. T. Barnsley, Chief Road Engineer.

**Scranton, Pa.**—Council has passed nine ordinances for improvement of streets; plans will be prepared for paving Mifflin ave.

**Scranton, Pa.**—Mayor John Von Bergen, Jr., has signed ordinances for estimate of cost of two stone crushers; authorizing purchase and exchange of road rollers; for crosswalks at Spring and Edna ave. and other streets; ordering plans for paving two streets and grading one and repair of Keyser ave.

**Uniontown, Pa.**—Council will advertise for bids for paving Oakland ave. with brick.

**Wilkes-Barre, Pa.**—County Commissioners Jones, McAvoy and Smith have decided to proceed with the building of county road from Duryea to the Lackawanna County line and work will be completed before cold weather sets in.

**Newberry, S. C.**—Citizens have defeated proposed \$300,000 bond issue for good roads.

**Sioux Falls, S. D.**—Citizens are urging paving of main streets in residence district; creosoted blocks will be used.

**Knoxville, Tenn.**—Council has ordered issuance of \$165,000 bonds for grading, curbing and paving 34 improvement districts.—J. M. Brooks, Mayor.

**Dallas, Tex.**—County has rejected all bids for grading and graveling seven miles of Richardson road and about four miles of Denton road; new bids will be advertised.—John Witt, County Engineer.

**Galveston, Tex.**—Galveston County will vote October 12 on \$500,000 bonds for road construction.

**Houston, Tex.**—City Engineer Tarver has prepared plans for paving Stuart st.

**Sherman, Tex.**—Business League is moving in matter of road improvement district to include the city.

**Sherman, Tex.**—Mayor J. C. Wall and Alderman Dugan, Chairman Committee on Public Improvements have visited Paris to inspect street work to obtain information in carrying on similar improvements.

**Bristol, Va.**—Washington County Farmers' Association will ask for \$300,000 bond issue to build good roads.

**Crystal Spring, Va.**—Crystal Spring Land Co. will lay 50,000 ft. of 5-ft. granolithic sidewalks.—T. W. Goodwin, President.

**Lynchburg, Va.**—Rustburg District Road Board in Campbell county has determined to build two miles of improved road near Concord, the surface being made of sand and clay combined with good drainage.

**Norfolk, Va.**—Board of Control has asked Councils for appropriation of \$2,245.50 for curbing and guttering Boissevain ave. between Langley st. and Orapax ave.

**Asotin, Wash.**—State and County will expend \$43,500 in repaving highways.

**Elma, Wash.**—County road, running south from Elma to the Chehalis River, about one mile long, will be improved.

**North Yakima, Wash.**—City will pave Naches ave. with asphalt or creosoted wood blocks.

**Puyallup, Wash.**—City will pave Pioneer ave.; cost about \$120,000; bitulithic, granitoid or asphalt will be used.

**Spokane, Wash.**—Council has decided to pave following streets: Division st. with trapoid; Washington st., 5th ave. and 10th ave. with oil macadam; estimated cost \$73,600.

**Tacoma, Wash.**—County Engineer Noel will make survey for new road between Carbonado and Melmont; distance about four miles.

**Tacoma, Wash.**—Citizens are urging extension of Muck-Kapowsin county road; County Commissioners have ordered construction of Taylor Bay road; distance half mile.

**Waitsburg, Wash.**—Street and Alley Committee will purchase lumber for construction of 51 crosswalks.

**Wheeling, W. Va.**—County Commissioners will receive bids for macadamizing about 6,220 yds. of roads.—A. S. Bell, County Engineer.

**Grand Rapids, Wis.**—Council has authorized \$15,000 bond issue for street improvements.

**Kenosha, Wis.**—Council has passed ordinance for construction of five miles of sidewalk.

**Racine, Wis.**—Council has passed an ordinance for paving two streets.—P. H. Connolly, City Engineer.

## BIDS RECEIVED AND CONTRACTS AWARDED

**Bessemer, Ala.**—Bids were received for putting down 6,975 lin. ft. of combined curbing and guttering on 17th st.; also for grading, slagging and cherting the same territory, and contracts were awarded to E. C. Jordan Construction Co. at 60c. per lin. ft., and to C. M. Burkhalter for 1,870 yds. of excavation, 25c.; 760 yds. of slag, 55c.; 760 yds. of chert, 75c.; 1,600 lin. ft. of curbing and guttering, 69c.; 890 yds. of cement walks, 33c., and 33.4 yds. of sewer, at \$6.50 per yd.

**Pasadena, Cal.**—Contracts have been awarded as follows: Chester ave., curb, gutter, oil, to George H. Oswald, \$3,712. Fowler st., oiling, D. C. Howard, \$468; Michigan ave., grade, curb, gutter, oil, to J. E. Haddock, \$4,232; Boylston st., oiling, to Charles A. Baldwin, \$163.40; Ritzman st., paving, to Rose & Wilson, \$1,471.50; Dearborn st., oiling, \$144, to D. C. Howard; Winona ave., oiling, to C. A. Baldwin, \$1,436; Union st., oiling, to C. A. Baldwin, \$103.70.

**Sacramento, Cal.**—Only one bid was presented for building three miles of the Kings River State Highway from a point known as Ten Miles, easterly on the Kings River road; this offer came from the George C. Pratchner Co. and was for \$18,500.

**Ansonia, Conn.**—Frank Brault has secured contract for paving with macadam portion of North Main st., at 72c. per sq. yd.; total, \$11,020.

**Hartford, Conn.**—Highway Commissioner James H. MacDonald has awarded to the B. D. Pierce, Jr., Co., of Bridgeport, a contract for 26,212 lin. ft. of macadam-telford roadway in the town of Montville, at \$1.48 per lin. ft. for the macadam and \$2.05 a lin. ft. for the telford.

He has awarded a contract for constructing 13,032 lin. ft. of macadam-telford roadway in the town of Waterford on the main highway between New London and Norwich, to C. W. Blakeslee & Sons, of New Haven, at \$1.83 a lin. ft. for macadam and \$2.68 a ft. for the telford.

A contract for building three sections of gravel-telford roadway, aggregating 3,400 ft., in the town of Harwinton on the highway from Torrington to Waterbury, was awarded to Joseph Mascetti, of Torrington, for \$4,586.

**Hartford, Conn.**—Highway Commissioner James H. MacDonald opened bids for the construction of gravel roads in the towns of East Granby and Stafford and awarded the contracts, but the Commissioner declined to award the contract for the construction of a macadam road in the town of West Hartford; Amos D. Bridges & Sons, of Hazardville, obtained the contract for 13,800 lin. ft. of gravel-telford road in the town of Stafford, at \$1.94 per lin. ft. for the gravel, \$2.54 a lin. ft. for the telford, \$6 a cu. yd. for the retaining wall, and 60c. a sq. yd. for cobblestone gutters. To the town of East Granby, through its Board of Selectmen, was awarded the contract for 2,800 lin. ft. of gravel-telford road in the town of East Granby at 95c. a lin. ft. for the gravel and \$1.45 for the telford.

**Thomaston, Conn.**—Bids for the new State road at Thomaston were opened at Hartford and the successful bidder was Edward McManus, of Waterbury, whose bids were \$3.57½ per lin. ft. for native stone or \$23,152 for the work, and \$1.67½ per lin. ft. for trap stone, or \$29,552 for the entire work; it was not decided which



kind would be used; work will begin in about two weeks.

**Madison, Ill.**—A. W. Eisenmayer, Granite City, has secured contract for paving Madison ave., for \$83,600.

**Paris, Ill.**—Bids were opened Sept. 3 for paving a portion of South Central ave., 5,600 sq. yds. vitrified brick, and 3,425 lin. ft. combined curb and gutter; contract has been awarded to Allen J. Parrish, of Paris, at \$8,710.—C. P. Lycan, City Engineer.

**Streator, Ill.**—The Board of Local Improvements let two contracts for paving, that for a block on Stanton st. being let to John Bear for \$1,665, who also secured contract for paving South Illinois st. from Lundy to Hall st., at a cost of \$9,910.

**Elkhart, Ind.**—H. G. Myrick & Co., of Chicago, who were awarded contract for constructing the Tarvia-filled macadam improvement on Johnson ave., Front st. and Edwardsburg av. have assigned the contract to the Andrews Paving Co., of Hamilton, O.

**Gary, Ind.**—W. H. Bell & Co. was the lowest bidder for paving 16th ave. at the following prices: 930 sq. yds. macadam pavement, \$1.03; 269 sq. yds. cement walk, 55c; 515 lin. ft. 6-in. by 20-in. curbing, 40c; 44 lin. ft. oak headers, 18c; 35 lin. ft. 12-in. drain pipe, 30c; 417 cu. yds. grading, 35c; total bid, \$1,583.82. Other bidders: Illinois Improvement & Ballast Co., \$1,650.91; Cain Construction Co., \$1,596.91.

The Cain Construction Co. was the low bidder for paving Monroe st. at the following prices: 3,400 sq. yds. macadam, 97c; 1,178 sq. yds. cement walk, \$1.21; 2,160 lin. ft. 6-in. by 20-in. curb, 45c; 192 ft. oak headers, 28c; 80 lin. ft. 10-in. drain pipe, 50c; 2,637 cu. yds. grading, 40c; total bid, \$6,843.94. Other bids: W. H. Bell & Co., \$6,854.51; Illinois Improvement and Ballast Co., \$7,229.42.

**Indianapolis, Ind.**—Bids were opened by the Board of Park Commissioners for the removal of surface soil and construction of an embankment for a boulevard along the north bank of Fall Creek between 23d and Illinois sts. In the specifications it was estimated that there would be 60,260 cu. yds. of fill in the embankment and 13,252 cu. yds. of surface soil to be removed. On these estimates the bids submitted would amount to the following figures: Morris M. Defrees, \$19,578; R. F. Pickens, \$20,107.48; W. F. Nugent & Bros., Louisville, Ky., \$21,-

312, and Mansfield Engineering Co., \$26,544.

**Rushville, Ind.**—Contract for about three miles of macadamized roads, bids opened Aug. 30, has been awarded to Greenwood & Connor, Connerville, for \$11,495.—J. M. Stone, County Auditor.

**Georgetown, Ky.**—Lancaster & Prather have been awarded contract for macadamizing Gano ave. by Council; 1,700 ft. will be macadamized, the metal being 20 ft. wide and the grade 30 ft.

**Lexington, Ky.**—The contract for the construction of the new proposed Thorns Mill road was let to the Home Construction Co.; work of grading the road, which is an old one, will begin immediately; the road is nearly two miles long.

**Louisville, Ky.**—Board of Public Works has awarded contract for improving Greenway pl. to Jefferson County Construction Co., at \$2.75 per front ft., with brick.

**New Orleans, La.**—Finance Committee has accepted bid of Metropolitan Construction Co., of New Orleans, at \$210,992.30, to pave City Park ave.; contract does not include construction of bridge over Orleans Canal, separate bids for which will be invited.

**Portland, Me.**—Following bids were opened Aug. 30 by Commissioners of Public Works for constructing a section of State road, from Bowdoin to Congress, on Vaughan st.: New England Paving & Construction Co., \$8,436; Angelo Lello, \$10,415, and John W. Gulliver, \$11,500.

**Baltimore, Md.**—Following are lowest bids opened Aug. 30 for improving (a) Columbia ave., and (b) Washington road: (a) about 1,700 ft. with vitrified brick, Patrick Reddington, 325 St. Paul st., \$19,448; (a) vitrified brick, with granite blocks between the car tracks, Nichols Bros., \$18,274, and for (b) 1½ miles with tarred macadam, M. A. Talbot & Co., American Building, \$22,634. Board of Awards, Aug. 1, awarded contract for paving Penhurst ave. to Patrick F. Flanagan, Lexington and Calvert sts.

**Baltimore, Md.**—The State Roads Commission has awarded contracts for building a number of miles of roads in the counties, and held other bids under consideration; for the improvement of the Falls road, from 3d ave. to the new city limits Patrick Reddington was the lowest bidder, at \$41,614.25; it is expected that Mr. Reddington's bid will be accepted; street, which will be 40 ft. wide, will be improved with vitrified

bricks; the contract for paving the Hartford rd., from the city limits to Taylor ave., 2.9 miles, was awarded to D. V. Ault, at \$40,-487; it will be improved with pitched macadam; bids were received for improving the Westport road, but they were held under consideration; the lowest bid, \$39,810.37, was submitted by D. V. Ault; the part of the thoroughfare from the tracks of the Western Maryland Railroad to the end of the street car tracks, a distance of about 2,000 ft., is to be paved with vitrified brick, and the remainder to the old English Consul's residence, with pitched macadam; the street will be 50 ft. wide. Other contracts awarded were as follows: Howard County—From West Friendship to Sykesville, 3¼ miles, M. Bennett, \$31,900.90; Carroll County—From Westminster to Cranberry Station, 11-10 miles, David E. Walsh, \$7,527.90; St. Mary's County—From Leonardtown toward Mechanicsville, 3¼ miles, McCormick & Co., \$40,470.92. Bids for improving about 4½ miles of roads in Washington County were rejected as too high.

**Catonsville, Md.**—County Highways Commissioners will award contract to Charles F. Heckel, Eutaw ave., Gardenville, to lay combination concrete curb, gutter and sidewalk on Bloomsburg ave.

**Ft. Howard, Md.**—Bids were opened by Constructing Quartermaster, U. S. Army, Baltimore, for construction of about 15,000 sq. ft. of granolithic sidewalks at Fort Howard; contract has been awarded to McCay Engineering Co., of Baltimore.

**Boston, Mass.**—Mayor Hibbard has authorized Superintendent Emerson to award to the Barber Asphalt Paving Co. an increase of their contract to repave Beacon st., which calls for some \$10,000 more than the original contract. The additional work will include the repaving of Beacon st. from Fairfield to Dartmouth st.

**Boston, Mass.**—Superintendent of Streets Emerson has received bids for the construction of macadam roadways on Hyde Park ave. from Ashland st. to the Hyde Park line, and on Fletcher st. from Centre to South sts., West Roxbury.

For the Hyde Park ave. work the West Roxbury Trap Rock Co. submitted the lowest bid, \$19,916. The other bidders were: James Doherty, \$20,846.90; J. H. McCarthy, \$21,083.50; Antony Cefalo, \$23,944.50; H. M. McBride & Co., \$24,416.50; Edward J. Hayden, \$27,002.50; D. E. Lynch, \$27,236, and J. C. Coleman & Sons Co., \$27,448.

For the Fletcher st. work James Doherty was the lowest bidder. His figures were \$6,102.20. The other bidders were the West Roxbury Trap Rock Co., \$6,339; H. M. McBride & Co., \$6,460.25; Antony Cefalo, \$7,090.50, and D. E. Lynch, \$8,029.

**Lowell, Mass.**—Purchasing Agent MacKenzie has awarded to P. P. Connors, of Lowell, the contract for delivering 9,000 paving blocks to the new fire house in West Centerville, at \$42.50 per 1,000.

**Highland Park, Mich.**—Council has awarded contract for paving Woodward ave. to the Central Bitulithic Co., for \$115,670.

**Eveleth, Minn.**—Council opened bids September 8 for 40-ton rock and roller crusher and the following bids with specifications were received: Austin-Western Co., St. Paul, \$5,530; Peter E. Mayer & Co., \$2,210; Simmons Roller Co., Fort Wayne, Ind., \$1,531.50; Monitor Road Co., New York, \$2,380; J. I. Case Co., Minneapolis, \$2,075.60; Troy Iron Works, \$2,345; J. K. Ward & Co., Minneapolis, \$2,520.

**Kansas City, Mo.**—County Court has awarded contract at \$18,152.50 to Joseph J. Randall, Independence, Mo., for grading and macadamizing Blue Ridge road, 3½ miles.

**Benson, Neb.**—Contract to pave Military ave. has been awarded to William Fitch Construction Co., of Benson, at \$16,000.—Ed. A. Steiger, City Clerk.

**Florence, Neb.**—Council has awarded paving work to M. Ford; Purington block, class B, at \$1.99 a sq. yd. is to be used; total cost, \$60,000.

**Clayton, N. J.**—Borough Council has awarded contract for putting down the remainder of the cement walks to Frank Marshall at \$1.09 a sq. ft.

**Collingswood, N. J.**—The contract for cement curbing was awarded to E. Wigglesworth at 37c. a ft.

**Kearny, N. J.**—J. F. Shanley & Co., Newark, were awarded contract to pave Maple st., from Johnson to Woodland aves., with McAvoy brick at \$2.14 per sq. yd.; Van Keuren & Son, of Kearny, received the contract to lay the curbing at 60c. per lin. ft.

**Jersey City, N. J.**—Contracts for the improvements of six streets with asphalt were awarded by Council, and the Uvalde Asphalt Paving Co. carried off five, as follows: 16th st., \$4,692.30; 25th st., \$7,576.90; 27th st., \$20,841.80; 45th st., \$17,813.90, and 46th st., \$18,490.30; contract for paving 37th st. went to the Filbert Paving Co., the bid being \$16,664.

**Jersey City, N. J.**—Henry Byrne got contracts for improvement of Nunda ave. and Bidwell ave.; his bid for the Nunda ave.

**Gary, Ind.**—Tabulation of bids received Aug. 17 for paving Broadway from Pennsylvania Railroad to 25th ave., all of which were rejected:

ITEMS	P. T. O'Brien	W. H. Bell & Co.	Gary Constr. Co.	McGillicuddy & Lempster	Peter Bros Paving Co.
6,523 sq. yds. Harris brick.....	\$1.81	\$1.82	....	\$2.38	....
" " " Terre Haute brick.....	1.80	....	....	....	....
" " " Townsend brick.....	1.85	1.84	\$1.95	2.37	....
" " " Metropolitan brick.....	2.00	1.87	2.00	....	....
" " " Hydraulic ".....	1.87	....	....	....	....
" " " Indiana ".....	1.87	....	1.95	....	....
" " " Purington ".....	1.95	1.86	2.02	....	....
" " " Bessemer ".....	2.53	1.85	2.00	2.45	....
" " " Obispo asphalt.....	2.47	....	....	....	\$2.30
" " " Wood block.....	2.49	....	....	....	....
" " " Bitulithic.....	2.49	....	....	....	....
5,088 " " cement walk.....	.89	.95	1.20	1.22	1.44
2,820 lin. ft. cement curb.....	.40	.40	.35	.35	.50
160 lin. ft. old curb headers.....	.15	.35	.20	.15	.50
2 catch basins with connections.....	.40	12.00	42.50	55.00	50.00
2,627 cu. yds. grading.....	.10	.27	.30	.30	.35
193 sq. yds. old walk to remove.....	.10	.02½	.05	.25	.10
1,488 lin. ft. old 6" x 24" curb to remove.....	.10	.02½	.10	.10	.20
1,405 " " old 6" x 18" curb to remove.....	.10	.02½	.10	.10	.20

**Portland, Me.**—Proposals for building State highway in city received Sept. 30; contract awarded to Northeastern Paving and Construction Co.

ITEMS	Northeastern Paving & Const. Co.	Angello Lorello Co.	John W. Gulliver	City of Portland
Price for complete work:				
7" macadam and block paving.....	\$8,436.68	\$10,415.25	\$11,500.00	\$10,564.86
Extra labor—bituminous surface:				
Common labor—per hour.....	.195	.22½	.19½	.19½
Labor to handle bit. products—per hour.....	.20	.26	.22½	.33½
Single team and driver—per hour.....	....	.45	.38½	.38½
Double team and driver—per hour.....	....	.60	.55½	.55½
Tar kettles—per day.....	.05	.75	.60	.50
Ord wood, per cord.....	4.00	10.00	10.00	10.00
Less:				
Common laborer—per hour.....	.15	.26	....	.19½
Watering cart—per hour.....	....	.60	Allow 2c per sq. yd. for watering.	....
Hassam Paving (9,875 sq. yds.).....	\$18,859.43	....	....	\$20,196.00
Prices by items:				
(1) 2,683 lin. ft. grading.....	\$0.42½	\$0.55	\$0.65	\$0.42
(3) 7,950 sq. yds. macadam.....	.53	.76	.80	.76
(8) 60 lin. ft. vit. pipe to catch basins.....	.45	.56	1.00	.50
(17) 1,925 sq. yds. cobble gutter.....	.23	.20	.35	.25
(18) 515 sq. yds. granite headers.....	1.40	1.40	1.50	1.85
(22) 3 catch basins.....	70.72	70.00	80.00	84.00
(28) 600 sq. yds. granite block paving, 5" concrete base—grouted and pebbled joints.....	2.80	2.58	3.30	2.80
(31) 9,875 sq. yds. Hassam paving.....	1.60	....	....	1.75

Bids asked for bituminous macadam on Vaughan st., city of Portland. Contractors bid on straight macadam 7-in. bituminous surface extra

contract was 84 per cent of the standard price, and that for the Bidwell ave. 89 per cent of the standard price.

**Morristown, N. J.**—Sans & Co. have been awarded contract for oiling the swamp road at Meyersville and the one at Afton, and the Headley Good Roads Company the contract for the Mt. Tabor Road.

**New Brunswick, N. J.**—Bids were opened by Board of Chosen Freeholders, Sept. 2, for construction of a stone road in County of Middlesex and contract was let to the Middlesex Contracting Co. of New Brunswick, for \$4,142.—Morgan F. Larson, 121 Smith st., Perth Amboy, County Engineer.

**Binghamton, N. Y.**—Board of Contract & Supply has awarded contract for paving with brick Henry st., to A. D. Osborn, at \$1.92 per sq. yd.

**Elmira, N. Y.**—The contract for repairing the State roads in this county has been let to Casey & Murray, of Rochester; \$27,885 will be expended on the State Line macadam road extending from this city to State line, a distance of nine miles; the State recently appropriated \$30,000 for resurfacing the top and putting on a new top dressing; other bids on the work were John H. Gordon, of Albany, \$33,883.80, and John C. Bradley, of Corning, \$29,523.24.

**Hornell, N. Y.**—McGreevy Construction Co. has been awarded a contract for laying 7,633 sq. yds. of wire-cut brick paving on a 6-in. concrete foundation, proportions 1:4:8, for \$1.78 per sq. yd.; also 3,171 cu. yds. earth excavation, at 40c. Total bid, \$20,325.93. Other bids: Cement Products Co., Erie, Pa., \$21,431.37; Gray & Miller, city, \$20,975.66.—A. F. Bannon, Jr., City Engineer.

**New York, N. Y.**—Bids were opened by John F. Ahearn, Borough President, for paving as follows: Regulating and repaving with asphalt block on concrete foundation Madison ave., from 94th st. to 116th st. Lowest bidder, Sicilian Asphalt Co., 41 Park row; 16,100 sq. yds. asphalt block pavement, except railroad area, \$1.70; 12,300 sq. yds. asphalt block pavement, within railroad area, no guarantee, \$1.70; 5,250 cu. yds. Portland cement concrete, including mortar bed, \$5.50; 9,650 lin. ft. new curb, 90c.; 650 lin. ft. old curb, 40c.; 78 noiseless heads and covers for sewer and water manholes, \$18; 27,500 sq. yds. old stone blocks, to be purchased and removed by the contractor, 1c.; total, \$87,231. Totals of other bids: Harlem Construction Co., 2 Rector st., \$94,201, and Barber Asphalt Co., 50 Church st., \$93,632.

Regulating and repaving with asphalt block on concrete foundation Fort Washington ave., from Broadway to 181st st. Lowest bidder, Harlem Contracting Co., 2 Rector st.; 28,500 sq. yds. asphalt block pavement, \$1.71; 3,360 cu. yds. Portland cement concrete, including mortar bed, \$6.78; 4,700 lin. ft. new curb, \$1; 7,100 lin. ft. old curb, reset, 35c.; 63 noiseless heads and covers, complete, for sewer and water manholes, \$20; total, \$77,945. The Barber Asphalt Co., 50 Church st., bid for this work, \$78,806.

Regulating and repaving with asphalt block on concrete foundation 2d ave., from 37th to 45th sts., and from 53d st. to 58th sts. Lowest bidder, Sicilian Asphalt Co., 41 Park row; 16,250 sq. yds. asphalt block pavement, except within railroad area, \$1.70; 1,590 sq. yds. asphalt block pavement in railroad area, no guarantee, \$1.70; 3,300 cu. yds. Portland cement concrete, including mortar bed, \$5.50; 5,700 lin. ft. new curb, 90c.; 250 lin. ft. old curb, reset, 40c.; 23 noiseless heads and covers, complete, for sewer and water manholes, \$20; 17,225 sq. yds. of old stone blocks, to be purchased and removed by contractor, 1c.; total, \$54,096. Totals of other bids: Harlem Contracting Co., 2 Rector st., \$61,632, and Barber Asphalt Co., 50 Church st., \$73,994.

Regulating and repaving with wood block on concrete foundation 2d ave., from 23d st. to 37th st., and from 48th st. to 53d sts.; 23,000 sq. yds. wood block pavement, except within railroad area, \$2.50; 2,500 sq. yds. wood block pavement, within railroad area, no guarantee, \$2.45; 4,700 cu. yds. Portland cement concrete, \$6; 7,970 lin. ft. new curb, 85c.; 500 lin. ft. old curb, reset, 35c.; 19 noiseless heads and covers for sewer and water manholes, \$17; 23,100 sq. yds. old stone blocks, to be purchased and removed by contractor, 6c.; total \$97,711. The Barber Asphalt Co., 50 Church st., bid for this work \$101,508.

**Syracuse, N. Y.**—The second bids for paving Belden ave. from Maltbie to North Geddes st. were received by the Board of Contract and Supply, the bids being for paving the entire street with one material were as follows: Nicholas Marnell, with Pennsylvania Clay Co. block, \$23,631.74; with Shawmut block, \$23,199.14. Warner-Quinlan Asphalt Co., with Pennsylvania Clay Co. block, \$25,663.20; with Trinidad or Bermudez asphalt, \$25,230.60. Gaffey & Byrne, with Jamestown block, \$22,941.39. F. J. Baker, with Johnsonburg block, \$22,827.66; with Trinidad asphalt, \$23,691.46.

Central City Paving Co., with Johnsonburg block, \$25,796.37; with Trinidad asphalt, \$25,363.77.

Bids for paving the sides of the street with asphalt and the railroad strip with brick were as follows: Warner-Quinlan Asphalt Co., with Trinidad asphalt and Pennsylvania Clay Co. block, \$25,447.60; F. J. Baker, with Trinidad asphalt and Johnsonburg block, \$23,474.46; Central City Paving Co., with Trinidad asphalt and Johnsonburg block, \$25,580.77.

**Akron, O.**—The contract for the Medina road was let by the County Commissioners to F. M. Wise, whose bid was \$16,800; it will be macadam road with tarvia filler. The contract for the paving of the Portage Path road has not been let.

**Columbus, O.**—The Board of Service has awarded street contracts amounting to \$54,043.50 to W. H. Luchtenberg; the contracts are for the improvement of Belvedere, Wheatland, Indianola and Whitethorn ayes.

**Toledo, O.**—C. W. Ryan received the contract for the improvement of the Lewis road from the Michigan State line to a point in Washington Township, for a distance approximating three miles, from the County Commissioners; there were three bidders. Ryan's bid was for furnishing stone for the road at the rate of \$1.03 per ton; the total cost will be between \$7,000 and \$8,000.

**Youngstown, O.**—The Board of Public Service has awarded the following paving contracts:

Glenaven ave., McGraw & Morrison, at \$3,621.64; Thornton ave., Kennedy Bros., \$6,793.08. East Wood st., Turner & Olson, \$4,290.20; Illinois ave., James McCarron, \$4,794.10. Davis st., grading, Oscar Alm, at \$550.

**Guthrie, Ok.**—Contracts were awarded J. F. Hill Constr. Co. by Council for paving 24 more blocks with asphalt at \$1.97 and six blocks more with two course brick at \$1.79; the contract covers the streets which were let to the Hill company last spring for single course brick paving, which it was found after work had been started would not stand up under the traffic. Action was deferred on the acceptance or rejection of the bids for the paving of 16 blocks more with asphalt.

The streets awarded for asphalt paving were Springer, Vilas, Warner and Maple. Hill's successful bid was: Asphalt, \$1.97; 3-ft. curbing, 78c.; plain curbing, 42c.; artificial stone, 60c.; brick sidewalk extension, 50c.; 36-in. sewer pipe in place, \$5; 12-in. sewer pipe in place, \$1; 8-in. sewer pipe in place, 85c.; intakes, \$15; 2 ft. curb and gutter, 54c.; cast iron plates, \$4.59. The contract was awarded for 1st st., for brick, two course, at \$1.79.

The Barber Asphalt Company was the only bidder against the Hill people and bid 40c. on plain curb, \$3 on 36-in. sewer pipe in place, 70c. on 12-in. sewer pipe in place and 55c. on 8-in. sewer pipe. On everything else the Barber bids were higher than those of the Hill company.

The Public Improvement Committee brought in a report for the rejection of the bids for the paving of the new streets, Capital boulevard, Walnut, Logan, Maple and Oak. The Barber people bid \$2 for this work and the Hill people \$1.94½.

**Lemoine, Pa.**—The Martin Stone Quarry, of West Fairview, was the lowest of three bidders for the paving of Hummel ave. and a section of Rossmoyne st., Lemoine, underbidding the next lowest bidder by nearly 50 per cent and received contract. The bids for the street, which will be of asphaltum macadam construction, were as follows: Stucker Brothers Construction Co., 80c.; Imperial Road Co., \$1.17; in all between 14,000 and 15,000 sq. yds. will have to be rebuilt; the construction requires a bed of broken stone six inches deep.

The contract for the laying of crossings was awarded to S. B. Leach & Co., of Lemoine, who will build cement crossings at \$1.44 a yd.; the Martin Quarry bid \$1.88 for cement with a granite top surface. The bid of the Martin Quarry for the rebuilding of the road was really 42c. with an additional 5½c. for the asphaltum.

**Chambersburg, Pa.**—Wm. C. Houser was again low bidder on street work and was given the contract to grade East Washington st. at 29c. a yd. for digging and 55c. a perch for stone.

**Easton, Pa.**—Common Council has decided to pave South 4th st. from Northampton to Washington st. with wood block providing the abutting property owners furnish the \$1,700 collected among them, the Easton Transit Co. to lay wood block the required 18 inches outside of the rails, and the U. S. Wood Preserving Co. give the \$300 they offered to have the work done; the contract is to go to the Pascoe Construction Co., the lowest bidders, at their price of \$2.22 per sq. yd.; cost to city, about \$10,000 more.

**Schuylkill Haven, Pa.**—John A. Rauen, of

Reading, has been awarded a \$700,000 street paving contract.

**Uniontown, Pa.**—Claiming that a clerical error had been made in his bids for curbing on North Prospect st., Contractor O'Connor was allowed 60c. per ft. instead of 45c.

**Charleston, S. C.**—Samuel G. Woods has secured contract for constructing first five miles of the macadam road between Yanceyville, N. C., and Danville; total distance, 15 miles; total cost, \$55,000.

**Dallas, Tex.**—For curbing and gutter, 24-in. size, on San Jacinto between Haskell and Washington, the bids were as follows: Klein Bros., 60c. a lin. ft.; Dallas Paving Co., 56c. a ft.

**Richfield, Utah.**—Council considered six bids for putting in cement walks on Main st., and Anderson-Fisher Lumber Co., city, being the lowest was awarded the contract, the bid being \$4.575 or 15½ cents per sq. ft.

**Seattle, Wash.**—The Barber Asphalt Co. has offered to lay asphalt on Vine st. and others at \$1.50 a sq. yd. For the last two years from \$1.85 to \$2.25 has been the prevailing price. Three bids were submitted for paving with brick 3d ave. between Pine and Virginia sts.; the lowest bid was that of Jeffery & Holt, at \$2.40 a sq. yd.

**Tacoma, Wash.**—North Lawrence st. and Puget Sound ave. will be paved with asphalt by the Independent Asphalt Paving Co. for \$32,943; there were three other bidders, the Barber Asphalt Paving Co., \$34,276; Warner Bros., \$35,200, and M. J. Hickey, \$36,921; the engineer's estimate was \$49,142.

The Independent Asphalt Paving Company was also awarded contract to pave North 28th, 30th and Proctor sts. for \$28,417. The Barber Asphalt Paving Company bid \$29,468; the Engineer's estimate was \$33,588.50.

Five bids were received on district No. 427, including the paving of Trafton st.; the Barber Company bid \$5,562, and was awarded the contract. Other bids were received as follows: Independent Asphalt Paving Company, \$5,684; Warner Bros., \$6,100; Bertelson & Sons, \$6,490; M. J. Hickey, \$5,995.

**Appleton, Wis.**—Following bids were opened for paving Prospect and 2d sts., (a) with brick, (b) creosoted block, and (c) concrete: Batchelor & Powell, of La Crosse, (a) \$2.25, (b) \$2.68, and (c) \$2; Hackworth Construction Co., of Appleton, (a) \$2.23, (b) \$2.70, and (c) \$1.73, and Kuneppel & Bartz, of Appleton, (a) \$2.20, (b) \$2.70, and (c) \$1.70.

**Green Bay, Wis.**—The McGrath Construction Co. has submitted lowest bid at about \$28,000 for paving portion of Broadway.

**Janesville, Wis.**—Contract for about 5,270 sq. yds. macadam pavement on High and Madison sts., bids opened Aug. 20, has been awarded to P. W. Ryan, of Janesville, for \$3,179, by C. V. Kerch, City Engineer.

## SEWERAGE

**Colusa, Cal.**—Citizens have voted \$50,000 sewer bonds.

**Elmhurst, Cal.**—City has sold \$75,000 sewer bonds to Walter Leimert, Oakland.

**Los Angeles, Cal.**—Plans are being prepared by Olmsted & Gillette, Wright & Callender Bldg., for sewer system.

**Pasadena, Cal.**—City has again taken up matter of plans for storm water drain on east side of city.

**Fort Pierce, Fla.**—Citizens will soon vote on \$10,000 bonds for sewers.

**Pensacola, Fla.**—No bids were received for connection of 1,000 homes with sewer.—L. E. Thornton, City Engineer.

**St. Augustine, Fla.**—Consulting Engineer W. W. Lyon has estimated cost of installing complete septic tank sewerage system throughout city at \$80,000.

**Orion, Ill.**—Cities of Moline and Rock Island are considering construction of joint sewer system; cost \$70,000.

**Paxton, Ill.**—Citizens have voted \$8,000 bonds for drainage purposes in the northwest portion of the city.

**Princeton, Ill.**—Council is considering establishment of sewerage district in south end of town.

**South Holland, Ill.**—Plans have been completed for concrete sewer; cost about \$10,000.

**East Chicago, Ind.**—Council has passed ordinance for sewer in 141st st. from Cannanport ave. to Alder st.

**Evansville, Ind.**—Board of Works has ordered sewer constructed in alley between Michigan and Virginia sts.

**Davenport, Ia.**—Council has instructed City Engineer to figure out cost of an intercepting sewer extending from Perry st. and then to figure cost of extending all sewers between these points out into the river 150 ft. further.

**Topeka, Kan.**—City Engineer J. P. Rogers has recommended independent sewer system on North Side as auxiliary to main sewer.

**Winchester, Ky.**—Citizens will vote in



November on \$65,000 bonds for construction of sewerage system.

**Fort Philip, La.**—Town is considering construction of a sewerage system.

**Lake Charles, La.**—Sewerage Board will at once select engineer to estimate cost of installing sewer system.

**Eveleth, Minn.**—City will let contract next spring for laying approximately 1,900 ft. of 12-in. sewer on Douglas ave.—D. P. McIntyre, City Clerk.

**Brookhaven, Miss.**—Preliminary plans have been prepared by A. T. Witbeck for sewer system; cost \$70,000.

**Slater, Mo.**—Council is considering construction of outlet of the sewerage system.

**Camden, N. J.**—Council has passed ordinance for sewers in three streets.—I. V. Bradley, Clerk.

**Margate, N. J.**—Council has authorized \$60,000 bonds for purpose of installing sewerage system.

**Paterson, N. J.**—Board of Public Works has ordered sewers constructed in four streets.—J. T. Brett, City Street Commissioner.

**Perth Amboy, N. J.**—Council is considering construction of 12-in. sewer in Pearl place 15-in. sewer in Williams st. and an 18-in. pipe sewer in Sutton st.—S. J. Mason, City Engineer.

**South Amboy, N. J.**—Citizens will vote on bond issue for construction of sewerage system.—S. J. Mason, City Engineer.

**Trenton, N. J.**—Council is considering sewerage of Chase st., West End ave. and Division st.

**Fulton, N. Y.**—Board of Public Works has estimated cost of constructing West Side sewer system at \$20,000.

**Monticello, N. Y.**—G. N. Bell, Kingston, will make survey for sewerage plant.

**Newburgh, N. Y.**—Council is considering construction of sewer in Robinson ave.—W. J. Blake, Jr., City Engineer.

**Poughkeepsie, N. Y.**—Residents of Prospect and North Clinton sts. are urging construction of sewers.—R. J. Harding, City Engineer.

**Schenectady, N. Y.**—Council has authorized construction of storm water sewers in Congress st. and on 7th ave.—C. W. Trumbull, City Engineer.

**Syracuse, N. Y.**—Plans will be drawn for sewer in Hunter ave.

**Utica, N. Y.**—Council has ordered issuance of \$18,000 storm water sewer bonds.

**White Plains, N. Y.**—Bids will be received for lateral sewer in Osborne st.

**Edenton, N. C.**—E. M. C. Ibbon, Jacksonville, Fla., has been selected to make survey for sewerage system.

**Washington, N. C.**—E. M. Gibbon, Jacksonville, Fla., has been selected to make survey for gravity sewer system.

**Bowling Green, O.**—Citizens will vote on construction of sewage disposal plant.

**Dayton, O.**—Council will consider issuing of \$8,200 bonds for storm sewer connecting with old Parrott st. sewer.

**Oakleigh, O.**—City has awarded \$2,000 sewer bonds to Seasongood & Mayer at \$155.25 premium.

**Struthers, O.**—Council has awarded \$5,000 sewerage bonds to Struthers Savings and Banking Co.

**Wooster, O.**—Council has passed ordinance authorizing \$7,000 bonds for constructing sewers.—H. H. Franks, Clerk.

**Atoka, Okla.**—Council has sold \$50,000 sewer and water works bonds to J. H. Mosier, of Muskogee.

**Stigler, Okla.**—Citizens have voted \$75,000 bonds for construction of sewer system and water works.

**Chambersburg, Pa.**—Bids will be asked for building Third Ward storm sewer either of terra-cotta or concrete; length 2,864 ft.

**Hazleton, Pa.**—City has been notified by State Board of Health that by 1911 it must make preparation to change entire sewerage system; cost about \$200,000.

**Media, Pa.**—Citizens are urging better drainage system.

**Pittsburg, Pa.**—Conference of officials of Greater Pittsburg, McKeesport and neighboring boroughs on question of sewage disposal will be held in near future.—F. Herbert Snow, Chief Engineer of State Health Department.

**Scranton, Pa.**—Mayor John Von Bergen, Jr., has signed ordinances requesting plans for First Ward and Irving ave. sewer systems.

**Sellersville, Pa.**—Residents of Sellersville are considering proposition of petitioning Councils to engage engineer to draw plans for complete sewer system and to prepare method for ultimate disposal of all sewage.

**South Bethlehem, Pa.**—Sewer Committee will have plans made and secure bids for placing traps at street intersections along line of Linden st. sewer.

**Gaffney, S. C.**—Citizens have voted bonds for construction of sewer system.—William W. Lyon, 305 Duval Bldg., Jacksonville, Fla., Consulting Engineer.

**Aberdeen, S. D.**—City is considering enlargement of septic tank; \$20,000 bonds proposed.

**Knoxville, Tenn.**—City is considering construction of sewer in Oklahoma ave.

**Corpus Christi, Tex.**—Citizens will vote October 5 on \$14,000 bonds for construction of sewer system.—J. W. Maxcy & Co., Houston, Engineers.

**Dublin, Tex.**—Citizens will vote on \$20,000 bonds for construction of a sewerage system.

**Richmond, Va.**—Southside Co. will lay about 1,150 ft. of various size sewerage in Woodland Heights.—J. Bryan, President.

**Bellingham, Wash.**—Council has approved plan for trunk sewer to drain the Meridian st. district; cost \$19,414.48.

**Spencer, W. Va.**—Council is considering construction of a better sewerage system.

**Madison, Wis.**—Council has ordered sewer construction in Livingston st. district.—O. S. Norsman, Mayor.

**Oaxaca, Mex.**—City has secured a \$750,000 loan for construction of sewerage and water works system.

## BIDS RECEIVED AND CONTRACTS AWARDED

**Rogers, Ark.**—William Riley Construction Co., St. Louis, Mo., has secured contract for constructing sewers from plans of M. A. Earl & Co., of Muskogee, Okla., for \$23,084.

**Sterling, Ill.**—Bids were opened as follows, Aug. 27, by Board of Local Improvements for (a) brick outlet sewer 1-1/3 miles long, 30 to 48 in.; (b) vitrified tile pipe sewer, 1/4 miles in length, 8 to 24 in. Logan & Gietz, Elgin, secured contract for (a) and (b) at \$24,978 and \$13,086, respectively; T. H. Layden, Davenport, Ia., (a) \$25,031, (b) \$13,117; Ridge Bros., Sterling, (a) \$28,916, (b) \$13,217; C. H. Green, Carthage, Mo., (a) \$26,962, (b) \$13,635; Monahan Bros. Co., Joliet, (b) \$13,446; Independent Construction Co., Davenport, Ia., (b) \$13,283.

**Ft. Dodge, Ia.**—Contract for constructing a sanitary sewer, bids opened Aug. 30, has been awarded to O. P. Herrick, of Des Moines.—King E. Beal, City Clerk.

**Baltimore, Md.**—The Sewerage Commission considered bids on the construction work opened by the Board of Awards, and recommended the awarding of contracts, which was done by the Board, as follows:

Disposal plant at Forest Park, to Lane Brothers Co. & Jones, the present contractors at the Back River disposal plant, for \$30,817.70.

Trunk sewers in Forest Park, to T. Wallace Reilly, for \$80,606.25.

Jones' Falls sanitary sewer interceptor, for the Eager st. high-level interceptor to above Union Station, partially through private property and partially along the falls, to Emory Talbott & Co., for \$43,925.50.

Lateral sewers throughout the northeastern section of the city, to William McCarthy & Co., for \$69,459.25.

Storm water drains, scattered, to M. O'Herron, for \$5,117.40.

In determining the lowest bidder on each of these contracts, the number of days required by each bidder to do the work was taken into consideration at the value stated. The quantities of work and bids received were as follows:

Sanitary Contract No. 40, Forest Park Sewage Disposal Works. Time considered at \$15 per day. The work includes: 5,000 cu. yds. earth excavation, 65 cu. yds. rock excavation, 800 cu. yds. rolled embankment, 1350 lin. ft. vitrified pipe drains and conduits 4-in. to 18-in. diam., 15,330 lin. ft. slotted vitrified tile slabs, 950 cu. yds. concrete, 50,000 lbs. reinforcing steel, 3,500 sq. ft. reinforcing wire fabric, 31 sluice gates and gate valves 2-in. to 18-in. diam., 10 tons cast-iron flanged pipe and specials, 4,600 cu. yds. filter stone.

Lane Bros. Co. & Jones, Baltimore, Md., 100 days, \$32,317.70; United Engineering & Construction Co., Baltimore, Md., 100 days, \$33,247.01; David Peoples, Baltimore, Md., 60 days, \$33,341.40; C. B. Clark & Co., Baltimore, Md., 100 days, \$34,672.95; Tiffany & Gail, Buffalo, N. Y., 170 days, \$36,362.47; The Pitt Construction Co., Inc., Pittsburg, Pa., 120 days, \$37,455.90; M. O'Herron & Co., Pittsburg, Pa., 125 days, \$39,421.80.

Sanitary Contract No. 41, trunk sewers, District No. 48. Time considered at \$50 per day. The work includes: 21,000 cu. yds. earth excavation in trench, 7,000 cu. yds. rock excavation in trench, 750 cu. yds. excavation in tunnel, 22,750 lin. ft. vitrified pipe sewer 10-in. to 24-in. diam., 1,700 cu. yds. embankment, 8,000 lin. ft. underdrain, 37 drop connections on sewers 8-in. to 15-in. diam., 735 "Y" branches, 85 manholes.

M. O'Herron & Co., Pittsburg, Pa., bid informal, number of working days omitted; T. Wallace Reilly, Baltimore, Md., 140 days, \$87,606.25; Lane Bros. Co. & Jones, Baltimore, Md., 200 days, \$92,296.65; James Ferry & Sons, Baltimore, Md., 140 days, \$97,989.40; M. A. Talbott Co., Baltimore, Md., 150 days, \$106,769; David Peoples, Baltimore, Md., 300 days, \$121,665.40.

Sanitary Contract No. 42, Jones Falls Interceptor, Section No. 1. Time consid-

ered at \$20 per day. The work includes: 2,615 cu. yds. excavation (earth) in trench, 950 cu. yds. rock excavation in trench, 600 cu. yds. earth excavation in tunnel, 1,550 cu. yds. rock excavation in tunnel, reconstructing 146 lin. ft. of old 48-in. storm water drain, 1,350 cu. yds. concrete masonry, 260 cu. yds. brick masonry, 12,000 lbs. structural steel, 1,600 lin. ft. underdrain, seven drop connections for 8-in. sewers, four manholes.

M. A. Talbott Co., Baltimore, Md., 75 days, \$45,425.50; C. B. Clark & Co., Baltimore, Md., 140 days, \$46,547; David V. Ault, Baltimore, Md., 80 days, \$54,984.45; M. O'Herron & Co., Pittsburg, Pa., 150 days, \$60,484.25; Metropolitan Contracting Co., Baltimore, Md., 150 days, \$62,915; Ryan & Reilly, Baltimore, Md., 175 days, \$72,639.25.

Sanitary Contract No. 43, Lateral sewers, District No. 29. Time considered at \$25 per day. The work includes: 43,150 lin. ft. vitrified pipe sewer 8-in. to 15-in. diam., 2,500 lin. ft. underdrain, 10 drop connections on 8-in. and 12-in. sewers, 24,800 lin. ft. house connections, 2,725 "Y" branches, 500 lin. ft. of 6-in. and 8-in. vitrified pipe standpipes, 250 manholes.

Wm. McCarthy & Co., Pittsburg, Pa., 100 days, \$71,959.25; Jas. Ferry & Sons, Baltimore, Md., 110 days, \$80,262.05; M. A. Talbott Co., Baltimore, Md., 125 days, \$83,948.60; T. Wallace Reilly, Baltimore, Md., 120 days, \$88,042.50; David V. Ault, Baltimore, Md., 70 days, \$89,218.25; Ryan & Reilly, Baltimore, Md., 125 days, \$89,510.

Storm water Contract No. 8. Time considered at \$25 per day. The work includes: 2,230 lin. ft. 15-in., 18-in. and 24-in. vitrified pipe drains, 350 lin. ft. 12-in. and 15-in. inlet connections, 40 cu. yds. concrete, 12 cu. yds. brick masonry, 10 cu. yds. rock excavation, 10 manholes, three inlets.

M. O'Herron & Co., Pittsburg, Pa., 20 days, \$5,617.40; M. A. Talbott Co., Baltimore, Md., 25 days, \$5,944.70; James Ferry & Sons, Baltimore, Md., 40 days, \$7,096.20; David Peoples, Baltimore, Md., 60 days, \$7,460.90; W. A. & C. F. Thompson, Baltimore, Md., 45 days, \$8,710.50.

**Cumberland, Md.**—Contract was awarded to Lefevre & Edwards, city, for building reinforced concrete conduit on South Lee st. to carry the water of Dry Run through that part of the city.

**Boston, Mass.**—Superintendent Emerson has given to the Coughlan & Shiels Company, the second lowest bidder, a contract for constructing new sewerage works in North Market street, between Commercial street and Faneuil Hall Square, at \$13,762. The other bidders were: J. H. Ferguson, \$12,338.50; P. W. Hill, \$17,917; Metropolitan Construction Company, \$18,534.75; D. F. O'Connell Company, \$19,623.50; J. J. Falvey, \$23,433.50.

The superintendent also awarded to John T. Shea, Jr., a contract for constructing sewerage works on Washington and Mora streets, Dorchester, for \$2,936.82. The other bidders were: John McCourt & Co., \$2,949.08; C. P. Conlin, \$2,989.25; J. H. Ferguson, \$3,071.10; E. F. Kennelly, \$3,208.65; John Guarino, \$3,216.87; F. A. Foster, \$3,461.35; D. E. Lynch, \$3,642.85; Fallon & Maffer, \$3,940.35.

**Malden, Mass.**—The Street and Water Commission opened bids for the construction of a sewer in Lynn st., Linden, as follows: Thomas Bruno, \$7,753.50; G. M. Byrne & Co., \$7,164.50; James Driscoll & Son, \$6,955. Contract was awarded to Jas. Driscoll & Son.

**Milford, Mass.**—James D. Kelley, Dorchester, submitted lowest bid, Aug. 30, for laying 6,000 ft. of sewer pipe. Other bidders were: Ardolino & Cefalo, Milford, \$9,465, and Cenedella & Co., Milford, \$10,407.50.

**East Orange, N. J.**—A contract has been awarded by the East Orange and Ampere Land Company for the installation of a storm sewer in the 140 acres which the company is developing in East Orange; the sewer construction will involve an expense of \$75,000.

**Linden, N. J.**—The firm of Wade & Callaghan, Elizabeth, has just been awarded by the Borough Committee a contract for six miles of lateral sewers, to connect with the big trunk sewer they are building in the borough; the new job will cost \$35,000, and must be completed in three months.

**Buffalo, N. Y.**—W. G. Smith was the lowest bidder for sewers in Montrose, Kenmore and Homeworth aves. and Main st., between Devereaux ave. and the city line; his bid was \$12,990. The lowest bidder for a sewer in Oak Grove ave. and Gillette st. was Spiess & Fahning at \$2,065.

**Newburgh, N. Y.**—Contract for sewer in Park ave. between Gidney ave. and South st. was awarded O'Rourke & Gainey, the lowest bidders, at 99 cents per lin. ft., with 20 cents per cu. yd. extra for rock.

**Alliance, O.**—Bids for the construction of sewer No. 111 were opened, those of Applegate & Sons and J. C. Devine being the only ones received; the bid of the latter was the lowest.

## WATER SUPPLY

**Dunmore, Pa.**—Antonio Freda, the lowest bidder for the construction of Section A of the Third District sewer, was awarded the contract for \$29,912; two other bids were received, as follows: Engineering Construction Company, Scranton, \$31,900, and O'Boyle Bros., Dunmore, \$34,675.

Five bids were received for the construction of the Fourth District sewer. Summa & Fontesero, the lowest bidders, were awarded the contract for \$7,816; the other bidders were: O'Boyle Bros., \$9,475; T. De Andrea, \$9,150, and the Engineering Construction Company, \$9,288.

**Lebanon, Pa.**—Council's Highway Committee has awarded a contract to a Detroit firm for the reinforced concrete pipe to be used in the proposed new storm sewer on Seventh st., a distance of over two blocks. There were two bidders for the pipe, the other bidder being an Ohio firm. This kind of pipe is made by only two companies in the United States. The Detroit firm was the lower bidder of the two and its prices were \$1.95 for straight pipe and \$2.15 for curved pipe, per linear foot. The pipe is to be thirty inches in diameter inside on the straight line and 42 inches in diameter inside on the curved portions.

**Binghamton, Tenn.**—Council has approved the reports of the committee awarding sewer contract, including excavation and the filtration plant, to H. W. Brennan at approximately \$21,000.

**Nashville, Tenn.**—The Board of Public Works has awarded several sewer contracts. The bids on constructing a sewer in alley 172 were as follows: Curtis & LeSueur, \$1,659.45; J. A. Webb, \$1,807; Sullivan & Hagerty, \$1,799.80; Curtis & Tarpley, \$1,792.50.

Bids on a sewer in alley 258 were: Sullivan & Hagerty, \$398; Quinn & Ellis, \$421.25; T. V. Barnesfield, \$481; J. E. LeSueur & Co., \$605.25; J. A. Webb, \$551.50; Curtis & LeSueur, \$439.

**Dallas, Tex.**—For furnishing 12-in. sewer pipe the San Antonio Sewer Pipe Co. bid 24¢ c. a ft.

The contract and bond of C. W. Wolcott for laying the sanitary sewer on the Katy right-of-way from Oak Lawn to Newman st. was approved.

**Houston, Tex.**—Bids for the construction of sanitary sewers in the First and Sixth wards were received as follows: Collins Bros., J. Whit Gurely & Co., of Mobile, Ala., and Jno. C. Underwood, of Houston; they were referred to the City Engineer for tabulation and report.

**St. Albans, Vt.**—The contract for laying the trunk line and cut-off sewers for which the city has bonded to the amount of \$40,000, was let to E. F. Moore, of Burlington, whose bid of \$22,619.10 was the lowest received; other bids received were: Frank L. Allen, of Worcester, Mass., \$28,794.10; Farnum, Hanson Co., of Boston, \$29,854.29; Coughlan & Shields, of Boston, \$26,175.45; and W. S. Teachout, of Essex Junction, \$25,366.05.

**Parkersburg, W. Va.**—J. W. Curry has been awarded contract for first three sewers given below and T. S. Savage for the other two:

On Seventh st., from Stephenson ave. to Camden st.; amount appropriated, \$869.70; R. E. Kerr, \$868.70; T. S. Savage, \$813.60; J. W. Curry, \$775.50.

On Liberty st. from Nineteenth st. to the Stephenson line; amount appropriated, \$448.94; T. S. Savage, \$434.50; J. W. Curry, \$411.25.

Sewer on Oak, 21st, Plum and 19th sts.; amount appropriated, \$6,873.46; T. S. Savage, \$6,468.80; J. W. Curry, \$6,446.10.

On Charles st. from George st. to Laird ave.; amount appropriated, \$275.50; R. E. Kerr, \$262.60; J. E. Curry, \$252.50; T. S. Savage, \$250.00.

On Avery st. from 17th st. to 18th st.; amount appropriated, \$1,008.25; J. W. Curry, \$1,096.25; T. S. Savage, \$1,002.00.

**Beloit, Wis.**—G. Maffoli, of Rockford, Ill., has secured contract for sewer work as follows: 4,800 ft. 8-in. vitrified pipe, 62 cts.; 875 ft. 20-in. vitrified pipe, 90 cts.; 20 man-holes, each \$30.

**Milwaukee, Wis.**—The Board of Public Works has awarded contract for laying 1,325 ft. of concrete sewer in Montana and Chicago sts. to R. J. Hickey, city, at \$17.14 per lin. ft.

**Portage, Wis.**—Bids were received and opened by the city clerk, Sept. 1, for the construction of a sanitary system of sewers, consisting of 66,574 ft. vitrified pipe, 96 concrete manholes, 50 lamp-holes, inverted siphon and disposal plant, and following are the totals of bids submitted: Blake Bros., Madison, Wis., \$79,800; Robert Nelson, Racine, Wis., \$56,036; J. Rasmussen & Son, Oshkosh, Wis., \$54,700; Pastrille-Lawrence Co., Chicago, Ill., \$62,000; F. E. Kaminski, \$58,534; P. R. Harding & Co., Racine, Wis., \$55,981; C. S. Crilley, Milwaukee, \$55,418; D. J. Christopher, Chicago, Ill., \$48,286; Dan Curtin & Co., Madison, Wis., \$59,757. Smith & Icke, of Madison, Engineers.

**Tempe, Ariz.**—Plans have been prepared by Sam Brown for extending water system in Gage addition; cost about \$4,000.

**Cedarville, Cal.**—Citizens will soon vote on installation of water system; cost about \$15,000; plan is to erect large tank or series of tanks in town and have water pumped from Cedar Canyon, distance half mile, to tanks.

**Coalinga, Cal.**—Fresno Light & Power Co. will expend \$750,000 in laying pipes and installing new water plant.

**Colusa, Cal.**—Citizens have voted \$50,000 water bonds.

**San Pedro, Cal.**—City will install two pumps for pressure in fire fighting and will lay 8-in. fire main.

**Sacramento, Cal.**—Professor C. G. Hyde has about completed preliminary plans for proposed filtration plant.—C. L. White, Mayor.

**Vallejo, Cal.**—City has rejected bids for installing water mains and meters at Cordelia; lowest bid was \$455; estimated cost \$250.—Arthur Noyes, City Engineer.

**Fort Pierce, Fla.**—Citizens will soon vote on \$10,000 bonds for establishment of a municipal water works plant.

**Hartselle, Fla.**—City is considering construction of water works.

**Jacksonville, Fla.**—Superintendent Ellis has recommended digging of another well to supply water to water works plant; about 700 ft. of pipe will be laid.

**Jacksonville, Fla.**—City will purchase 500 tons of cast-iron pipe.

**Lakeland, Fla.**—Citizens will vote on \$18,000 bonds for improvement of water works and extension of water mains.

**Sarasota, Fla.**—City has granted franchise for construction of water works.

**Meridian, Ida.**—City is considering immediate installation of water supply capable of furnishing water to a population of 5,000 people.—John Walter Johnson, Contracting Engineer, 804 Monadnock Bldg., Chicago, Ill.

**Sandpoint, Ida.**—Citizens have petitioned Council for a municipal water plant.

**Mattoon, Ill.**—Citizens will vote on \$25,000 bonds for installation of a water works system.

**Waukegan, Ill.**—Board of Local Improvements has passed resolution for constructing water mains on Sheridan road and other streets.—H. Throckier, City Clerk.

**Michigan City, Ind.**—Council has passed ordinance appropriating \$8,000 for water mains.

**Pratt, Kan.**—Citizens have voted \$20,000 bonds for extension and improvement of present water works system.

**Salina, Kan.**—Citizens will vote on purchase of water works; cost \$202,749.

**Glenview, Ky.**—The Glenview Water Pipe Co. will soon award contract for extension of pipe from Mocking Bird Valley to this city.

**Kennebunk, Me.**—Mousam Water Co. will extend an 8-in. pipe 5,000 ft.; also install nine hydrants and increase standpipe capacity.

**Lisbon Falls, Me.**—Citizens have voted \$74,000 for installation of water works system.

**Barre, Mass.**—Council has appropriated \$1,000 for extension of water system.

**Hudson, Mass.**—Town will expend \$10,000 to construct eight new filter beds.

**Hancock, Mich.**—City will advertise for bids for construction of 2,000,000-gallon reservoir; mains are to be extended and an electric pump purchased; Board of Public Works has instructed City Engineer Craig to prepare plans.

**Manistee, Mich.**—City has selected Engineers Alvord & Burdick, 140 Dearborn st., Chicago, to make report on water supply.

**Northville, Mich.**—City will soon select engineer to examine its water system, with a view to extensions.

**St. Joseph, Mich.**—Council has instructed Board of Public Works to ascertain cost of filtering plant for the city water works.—W. J. Cleary, City Engineer.

**Thompsonville, Mich.**—Citizens will vote on \$3,000 bonds for extending water works system.

**Austin, Minn.**—Citizens have voted \$20,000 bonds for construction of a water works system.

**Greenbush, Minn.**—Council has voted to extend water mains.

**Winona, Minn.**—City has selected Engineers Alvord & Burdick, 140 Dearborn st., Chicago, to make report on water supply.

**Alton, Mo.**—Local water company will extend its mains and will install 20 hydrants.

**Moberly, Mo.**—City will issue \$150,000 water works bonds.

**Fremont, Neb.**—Village of Uehling will vote on bonds for installation of water

works; bids will be advertised and plant put in this season.

**Havelock, Neb.**—Citizens will vote on \$20,000 bonds for water and sewer extensions.

**Valentine, Neb.**—Plans are being prepared by Engineers W. K. Palmer Co., Dwight Bldg., Kansas City, Mo., for improvements to water works system; cost \$42,000.—A. M. Morrissey, City Clerk.

**Cape May, N. J.**—Council is considering advisability of erecting standpipe 110 ft. high and 30 ft. diameter to replace some of tanks in use at city water works.

**Collingswood, N. J.**—Citizens have voted in favor of municipal water plant; cost \$123,050.

**Bainbridge, N. Y.**—Eugene F. Musson has been selected as Engineer in Charge of water works improvements; cost \$10,000.—H. D. Owen, Village Clerk.

**Ithaca, N. Y.**—Plans and estimates have been completed for improvement of dam and pipe line.—W. O. Kerr, City Clerk.

**New York, N. Y.**—City will at once buy from 1,000 to 1,500 tons of cast-iron pipe.—J. H. O'Brien, Commissioner Water Supply, Gas, Electricity.

**Rochester, N. Y.**—City has awarded \$200,000 water works improvement notes to Bond & Goodwin at 4.125 per cent discount and \$11.50 premium.

**Greensboro, N. C.**—Hook & Rogers, Charlotte, have prepared plans for water system for Colored Agricultural and Mechanical College.

**Akron, O.**—Council has passed \$1,000 enabling bond ordinance for preparation of plans for municipal water works.

**Mansfield, O.**—Council has authorized Board of Public Service to advertise for bids for \$12,000 bonds for constructing a city pipe line and pumping station.—S. F. Bell, President.

**Oakleigh, O.**—City has awarded \$3,000 water bonds to Seasongood & Mayer at \$186.30 premium.

**Atoka, Okla.**—Council has sold \$50,000 water works and sewer bonds to John H. Mosier, of Muskogee.

**Durant, Okla.**—City has sold \$50,000 bonds to John Nuveen & Co., Chicago, at par; proceeds will be used to establish filter plant and for other improvements.

**Hobart, Okla.**—Council has passed an ordinance authorizing Fire and Water Committee to immediately secure necessary labor, supplies and materials for constructing a well 30 ft. in diameter and 36 ft. in depth from the surface of the ground; work is to be commenced at once and rushed to the earliest possible completion.

**Kingston, Okla.**—Citizens have voted \$12,500 bond issue for water works.

**Lawton, Okla.**—David L. Stone, Captain and Quartermaster of the United States army, has filed notice of filing of water rights for immense water works reservoir; watershed will cover 27 square miles; impounding of such water will be accomplished by construction of a dam across West Cache Creek, in Wichita mountain forest reserve.

**Rosevelt, Okla.**—Citizens have voted \$20,000 water works bonds.

**Stigler, Okla.**—Citizens have voted \$75,000 bonds for construction of water works and sewer system.

**Gold Hill, Ore.**—City will install water system this fall; work includes the laying of 4-in. and 3-in. pipe.

**Portland, Ore.**—Detailed plans have been filed by Engineer D. D. Clarke for connecting city water system with that of Woodmere Water Co. for purpose of extending relief to residents of Mount Scott District; two different plans were submitted: one was for laying a 12 or 16-in. main from high service main, distance 5,300 ft., to connect with company's 10-in. main; cost \$13,450 and \$18,500, respectively; other was for permanent water system, at cost of \$212,000.

**Bellwood, Pa.**—Logan Valley Water Co. is considering building of much larger reservoir for water supply.

**Gaffney, S. C.**—Citizens have voted bonds for construction of water works.—William W. Lyon, 305 Duval Bldg., Jacksonville, Fla., Consulting Engineer.

**Faulkton, S. D.**—Citizens have voted for water works purposes.

**Lexington, Tenn.**—H. E. Graper, C. G. Gathings and N. R. Barham will organize company to construct water works.

**Mountain City, Tenn.**—City is considering construction of gravity water plant; two miles 6-in. cast pipe, with laterals, will be required.—E. E. Butler is interested.

**Ennis, Tex.**—Citizens will vote on \$12,000 bonds for water works purposes.

**Jacksboro, Tex.**—Citizens will vote September 15 on \$27,500 water works bonds.

**Sulphur Springs, Tex.**—Citizens will vote September 21 on \$10,000 bonds for improvement of water works.

**Ogden City, Utah.**—City is considering extension of feed pipe from the reservoir



to connect with the 12-in. main on Washington ave.

**Park City, Utah.**—Citizens will vote September 20 on \$50,000 bonds to supply city with water.

**Salt Lake City, Utah.**—Council is considering expending \$90,000 to complete water system in Fourth Ward.—L. C. Kelsey, City Engineer.

**Willard, Utah.**—Citizens are considering installation of water system; reservoir would be built in foot hills.

**Bellingham, Wash.**—City will install a water system for Silver Beach; cost \$12,000; work will start in near future.

**Tacoma, Wash.**—Special Water Committee has recommended installation of pumps at Maplewood Springs; cost, including pipe line, \$250,000.—H. J. McGregor, Commissioner of Public Works.

**Tacoma, Wash.**—Council has voted to construct a 6-in. water main on N. 25th st., 8-in. main on North 24th st. and a 14-in. wooden stave pipe on Proctor st.; cost \$9,919.

**Martinsburg, W. Va.**—Council has adopted ordinance providing for \$40,000 bond issue for extension and improvement of water works system.

**Grand Rapids, Wis.**—Council has authorized \$20,000 bonds for water works extension.

**Sheboygan, Wis.**—Estimates and plans have been prepared for construction of power plant at Ashby Rapids.

**Ottawa, Ont., Can.**—City has awarded \$419,420 water works and improvement bonds to Bank of Ottawa at par.

### BIDS RECEIVED AND CONTRACTS AWARDED

**Lake Village, Ark.**—Justin Matthews, of Little Rock, has been awarded contract for constructing complete water works system for \$27,000.—Lund & Hill, Little Rock, Engineers; Messrs. Cook and Carlton, Water Works Commissioners.

**Sacramento, Cal.**—State Engineer Ellery opened bids and W. H. Booth was the lowest bidder for installing a sewer and water system in the Redwood Park in the Big Basin, offering to do the work for \$4,800; the contract was awarded to Booth; three other offers were made, one of \$4,870, another \$5,600 and one of \$8,000.

**Quincy, Ill.**—Contract for a dam over Mill Creek near the Jacob Reichert farm, and a ditch to be dug near the same place, has been awarded to Jacob Reichert & Son at \$1,058.

**Michigan City, Ind.**—The Board of Public Works have awarded contracts for \$8,000 worth of new water pipe, valves and connections; contract for the water pipe was let to A. M. Ozburn, of Chicago, representing the Lynchburg and Sheffield companies, while the valves and connections will be furnished by the A. P. Smith Manufacturing Company, of Newark, N. J. The water pipe will be furnished at the following figures: 5,300 ft. 12-inch pipe at \$23.50 per ton; 2,000 ft. 6-inch pipe, \$24.45 per ton; 1,000 ft. 4-inch pipe, \$24.70 per ton.

The valves and connections will be furnished at these figures by the A. P. Smith Mfg. Company, Newark:

Sixteen 6-inch valves and connections will cost \$11.50 each, and three 12-inch valves and connections, \$31 each.

**Wakeeney, Kan.**—Contracts for constructing water works have been awarded as follows: total cost \$25,000; T. C. Brooks & Sons Co., of Jackson, Mich., pipe line; Chicago Iron & Bridge Works, tank and tower; Fairbanks, Morse & Co., pumping plant, bids opened September 1.—Geo. P. Taylor, Stockton, Engineer.

**Amherst, Mass.**—Bids were opened August 30 by Amherst Water Co. for construction of earth dam with concrete core wall, from plans of Wm. S. Johnson, 101 Tremont st., Boston, and successful bidder was P. A. Breglio, Springfield, as follows: Five acres grubbing and clearing, each, \$650; 8,000 cu. yds. earth excavation, 35c.; 18,000 cu. yds. earth fill, 50c.; 650 cu. yds. loam surfacing, 47c.; 1,200 cu. yds. concrete, \$6.15; 1,800 sq. yds. slope paving, 90c.; 700 cu. yds. rubble masonry, \$4.50; gates, pipes and appurtenances, \$700; total cost, \$28,205. Totals of other bids: Kiely & Gleason, \$29,197; Jas. D. Kelley, \$32,660; Ryan, Unmack Co., \$33,417; C. E. Trumbull & Co., \$33,690; Wm. Orlando, \$34,620; Michael Little & Co., \$35,060; Jos. Long & Co., \$38,130; H. W. Warner, \$38,360.

**Cloquet, Minn.**—Bids for water and sewer extensions were opened August 16 and contract has been awarded to Pastoret-Lawrence Co., Phoenix Blk., Duluth, Minn., at \$13,487.—S. L. Moyer, City Engineer.

**Carthage, Mo.**—Contract for the concrete reservoir for the municipal water works system was let by the Board of Public Works to Tangner & Brosius for \$8,350, work to be completed in 90 days; reservoir is to be of 1,500,000 gallons capacity; it is to be oval in form, 146 ft. in length and

115 ft. in width; its depth will be 13½ ft., calculated to carry water to the depth of 12 ft. There were six other bidders and their bids were as follows: Leslie Davis, \$8,182, with a 120-day limit for completion; T. K. Wood, \$8,217.50, with 120-day limit for completion; Howard & Brown, \$8,450, with 160-day limit for completion; T. W. Keller, Webb City, \$8,475.40, with a 90-day limit for construction; Berkebile & Jackson, \$8,900, with 175-day limit for construction; Fred Dieter, \$9,496, with 175-day limit for construction.

**Burlington, N. J.**—Contract for the construction of filter plant has been awarded to Fred T. Ley Co. for \$25,000.

**Jersey City, N. J.**—The Street and Water Board has awarded to the F. M. Stillman Company the contract for the completion of the repairs to the city's 36-inch main under the Hackensack River for \$4,500; the Merritt-Chapman Wrecking Company asked twice that sum.

**Mount Morris, N. Y.**—Board of Village Trustees has awarded general contract to D. D. Dugan, Olean, N. Y., for constructing water works system from plans of Engineer J. F. Witmer, 64 Ashland ave., Buffalo.

**Bottineau, N. D.**—Gilbert Haggart, of Fargo, has been awarded contract for putting in the water works including the standpipe and pumping station, water mains, sewer mains, septic tank, all complete; his bid of \$49,000 was the lowest. The next lowest bid was that of James Kennedy, of Fargo, who offered to do the work for \$50,000. The work is to be completed by Jan. 1, 1910.

**Okemah, Okla.**—Squire Electric & Construction Co. has been awarded contract by Town for construction of the water and light plant, at \$43,189; company will purchase boilers, engine, generator, motor, triplex pumps, cast-iron pipe, copper wire and poles.—M. A. Earl & Co., Muskogee, Engineers.

**Wetumka, Okla.**—Federal Engineering & Contracting Co., Okmulgee, has secured contract for water works; cost about \$40,000.

**Chambersburg, Pa.**—W. H. Murphy, at his bid of 15 cents a foot, was given the contract for laying the water main on College ave.

**Scranton, Pa.**—The Eastern Mfg. Co., Elmira, N. Y., has secured contract for about 30,000 ft. of wood pipe to be used to convey the water supply of the Lackawanna Railroad in Scranton and vicinity; cost about \$65,000.

**Birmingham, Tenn.**—Water and Sewerage Commission has awarded contract at \$17,000 to Philip H. Porter, Louisville, Ky., to construct water works.—J. A. Omberg, Jr., Goodwyn Institute, Memphis, Engineer.

**Dallas, Tex.**—Eighteen of the 36-in. joints of cast-iron pipes needed by the city water works will be furnished by the United States Pipe & Foundry Co., at a cost of \$29.80 a ton.

For clearing the city's White Rock reservoir land the following bids were submitted: M. L. Lagow, \$35 an acre; S. H. Fisher, 50c. a cord, or \$16 an acre; W. C. Taylor, \$5 an acre and the wood.

**Seattle, Wash.**—Contract for a system of distributing water mains in West Seattle was awarded by the Board of Public Works to the Jahn Contracting Co. at \$139,445.10.

**Spokane, Wash.**—Huetter & Zirngibl, Spokane, have secured contract for four new standpipes; total cost \$71,223.

### LIGHTING AND POWER

**Hartsells, Ala.**—City is considering construction of electric light plant.—J. H. Corsbie, Mayor.

**Gurdon, Ark.**—Ohio Stave & Lumber Co. is considering installation of electric light plant.

**Little Rock, Ark.**—C. E. Hart, Joplin, Mo., is interested in construction of water power electric plant in Southern Arkansas; 100 miles of pole lines will be required.

**Colma, Cal.**—Citizens will soon vote on proposition to form lighting district and on installation of street lighting system.

**Fruitvale, Cal.**—City has decided to establish new lighting district north of East 14th st.

**Kennett, Cal.**—W. R. Conant and W. D. Pratt have located 1,000 inches of water of Castle Creek, to be diverted near the head of the creek, which is the outlet of Glacier Lake, five miles west of Castella; purpose of the locators is to use water for the development of electric power for distribution to Delta, Lamoine and Castella.

**Los Angeles, Cal.**—Gas and Light Committee will visit Wilmington to investigate lighting facilities and will report to Council.

**Orland, Cal.**—Citizens have voted to maintain street lights in main part of town; cost about \$1,200 per year.

**Boulder, Col.**—Power, light and heating

plant will be installed on University campus; cost \$70,000.

**Colorado Springs, Col.**—Mayor Avery is urging establishment of municipal lighting plant.

**Fort Pierce, Fla.**—Citizens will soon vote on \$10,000 bonds for installation of municipal electric light plant; proposition granting franchise to St. Lucie Ice Co. for establishment of a plant was defeated.

**Jacksonville, Fla.**—City will purchase 15,000 pounds of copper wire; cost about 15c. per pound.

**Lakeland, Fla.**—Citizens will vote on \$40,000 bonds for improvement of electric light and water works plants and extension of water mains.

**Sarasota, Fla.**—City has granted franchise for construction of electric light plant.

**Peck, Ida.**—D. E. Peck is planning to install electric plant in connection with mill.

**Fort Wayne, Ind.**—Merchants' Association is urging installation of illuminating posts around Court House square; cost \$2,000.

**Davenport, Ia.**—People's Light Co. will erect a \$15,000 gas house.—J. F. Porter, President.

**Sigourney, Ia.**—J. F. Bray has purchased plant of the Sigourney Electric Light & Power Co.; improvements will be made.

**Ewing, Mass.**—Precinct No. 1 has authorized establishment of electric light district.

**Longmeadow, Mass.**—United Electric Light Co., Springfield, has applied to Council for franchise to extend its transmission lines to this city to furnish electricity for lamps and motors.—W. L. Mulligan, Springfield, Manager.

**Plainville, Mass.**—Citizens are considering installation of lights in newly acquired electricity for lamps and motors; tungsten lamps will be used for street lighting.—William Plattner is interested.

**Springfield, Mass.**—Committee on Electric Lines, Manager of electric light company and Electric Light Commission are considering proposed \$10,000 lighting system for Willimansett.

**Taunton, Mass.**—Manager Coleman, municipal lighting plant, is considering extension of service.

**Waltham, Mass.**—Mayor Walker has recommended all-night street lighting.

**Duluth, Minn.**—City will install side cluster lights on 1st st.

**Fairfax, Minn.**—City is considering installation of electric light plant.

**Fergus Falls, Minn.**—Council is considering extension of street lighting system on Lincoln ave. and Mill st; cost \$1,500 for each street.

**Glenwood, Minn.**—Installation of electric light plant is being considered.

**Butte, Mont.**—Alderman Dunks is urging installation of lights in newly organized district south of city.

**Clay Center, Neb.**—M. M. Johnson is considering installation of electric light plant to furnish electricity for lamps and motors.

**East Orange, N. J.**—East Orange & Ampere Land Co. will soon let contracts for lights on 140 acres being developed by company.

**Irrington, N. J.**—Town will take up matter of installing lighting plant with an electrical engineer in advisory capacity.

**Trenton, N. J.**—Council is considering establishment of electric lights on three streets.

**Caledonia, N. Y.**—Village Board has granted Livingston-Niagara Power Co. permission to enter corporation with its lines for purpose of supplying 25-hp. and lighting current generated at Niagara Falls.

**Geneva, N. Y.**—Plans have been prepared for complete municipal system of pole lines and conduits.

**Little Falls, N. Y.**—G. R. Beardslee, East Creek, is interested in construction of a power plant on East Canada Creek.

**Painted Post, N. Y.**—Village Board has made inquiry of Potter Gas Co. of Bradford, Pa., which wholesales gas to local companies in Addison, Corning and Elmira, whether company would be willing to bring line to this village from main line in Caton in order that Painted Post may be supplied with natural gas.

**Sylvan Beach, N. Y.**—Citizens have voted to install electric light and power plant.—Edmund Brown, Clerk Board of Trustees.

**Columbus, O.**—Consumers' Electric Co., of Forest, Hardin county, has been incorporated with \$35,000 capital stock by E. B. King, A. K. Nier, C. B. Horn, M. S. Wilcox and A. C. Bowser.

**Ardmore, Okla.**—Judge J. T. Dickerson will soon ask city for electric light franchise.

**Durant, Okla.**—City has sold \$50,000 bonds to John Nuveen & Co., Chicago, at par; proceeds will be used to install municipal lighting plant and for other improvements.

**Altoona, Pa.**—Altoona Gas & Fuel Co. has declined to accept franchise giving it authority to furnish natural gas to citizens.

**Dallaston, Pa.**—Borough Council has

voted to build municipal electric light plant.

**Myerstown, Pa.**—Myerstown Gas & Fuel Co. will lay about seven miles of pipe throughout various streets.

**Anderson, S. C.**—Anderson Water, Light & Power Co. will expend \$20,000 in improvements to power plant at Portman Shoals, including installation of step-up transformers, which will increase capacity of plant by 700 hp.—H. A. Orr, President.

**Inkster, S. D.**—City is considering construction of electric light plant.

**Lexington, Tenn.**—H. E. Graper, C. G. Gathings and N. R. Barham will organize company to construct electric light plant.

**Salt Lake City, Utah.**—Thor Power Co. has been incorporated to furnish light and power for dozen southern Utah towns; from plants in Salina and Six-Mile canyons transmission lines will carry light and power to Manti and Richfield; capital \$500,000.—A. G. Burritt, city, President; Mark Anderson, 508 Templeton Bldg., Secretary.

**Alexandria, Va.**—Board of Supervisors of Alexandria County has given Alexandria Electric Co. permission to extend its wires along public highways of the county; local company will soon be supplying current to Rosemont, Del Ray, St. Elmo, and the Fort Myer military reservation for lighting, heating and other purposes.

**Portsmouth, Va.**—Tentative plans have been mapped out by Local Improvement Board of Seventh Ward for installation of 38 electric arc lights for the illumination of the ward.

**Richlands, Va.**—Messrs. Clark & Davy have secured franchise to construct and operate electric light plant and water works.

**Blaine, Wash.**—Council is considering purchase of new engine for the use of electric light plant.

**Chewelah, Wash.**—Council is considering plans for increasing output of the municipal electric light plant from 55 hp. to 190 hp.; cost about \$5,000.

**Coaticook, Que., Can.**—Citizens are considering establishment of electric light plant.

**Lacombe, Alta., Can.**—Town is considering installation of a municipal light and power plant.

**Toronto, Ont., Can.**—City will soon receive tenders for pole line supplies, including copper and aluminum conductors, poles and cross-arms.

**Vancouver, B. C., Can.**—Engineer will soon be selected to make report with view to city purchasing extensive water power at Lilloet to be used in connection with the erection of a municipal power plant.—Al-derman Goodman, Chairman Committee.

### BIDS RECEIVED AND CONTRACTS AWARDED

**Oakland, Cal.**—The Suburban Electric Light Company was the only bidder before the Board of Supervisors, sitting as a Board for the Fremont lighting district, and offered to operate 50 lights at \$5 a light per month, and its offer was accepted.

**Middletown, Conn.**—Contract for street lighting has been awarded by city to Middletown Electric Light Co.; company will furnish electricity for arc lamps at \$89.50 each per year, and is to replace the old series incandescent lamps with tungsten lamps without extra charge to the city.—L. C. Whitney, Engineer.

**Washington, D. C.**—Contracts have been awarded by the Secretary of the Treasury, Washington, for furnishing electric lamps during the fiscal year ending June 30, 1910, to the Westinghouse Electric & Mfg. Co., Baltimore, Md., and the General Electric Co., Schenectady, N. Y.

**Elburn, Ill.**—The International Harvester Co. has contract for electric light plant which will cost \$5,326; other bids were: Fairbanks, Morse & Co., \$5,200; C. E. Wallace & Co., St. Charles, \$4,965 and \$5,618; Hinckley & Stout, Aurora, \$5,475; the contract calls for 43 street lights of 80-cp., which will be placed over all the street crossings in town, and power sufficient for 600 smaller incandescent lights for commercial purposes.

**Galena, Ill.**—Des Moines Bridge & Iron Co., Des Moines, has secured contract for building a power house for the Interstate Construction Co.; cost \$150,000.

**Indianapolis, Ind.**—Contracts were let to the Indianapolis Light and Heat Company for lighting and heating the public library and to the Merchants' Heat and Light Company for heating Shortridge high school. The first bid was \$375 a year for heating and 4 cents a watt for lighting, while the high school bid was \$6,624 a year.

**Irrvington, N. J.**—An offer to install a high tension electric lighting plant and all the necessary accessories, together with seven arc lamps of 2,000 cp. and not more than 800 32-cp. incandescent lamps for the net price of \$55,000, was received by the Town Council from the Reading Elec-

Co., of Reading, Pa.; the concern, which was the only one to submit an estimate for the proposed municipal lighting plant, agrees to erect the building, install the engine, boiler and other apparatus, place the poles, string wires and put the lamps in position ready for operation by the town for this figure, the latter to furnish the site for the plant; there was also received a bid from the Public Service Corporation for a renewal of its present contract, which expires January 1, to light the streets of the town for terms of one, three and five years; the prices submitted are as follows: One year contract, not less than 570 incandescent lamps of 32 cp., \$17 per lamp per annum; not less than five arc lamps of 2,000 cp., \$100 per lamp per annum; three year contract, not less than 570 incandescent lamps, first year, \$15 per lamp; second year, \$16 per lamp; third year, \$17 per lamp; arcs, \$95 each per year; five year contract, not less than 570 incandescent lamps, first and second year, \$15 per lamp; third and fourth year, \$16 per lamp; fifth year, \$17 per lamp; arcs, \$90 each per year. The estimate for one year stipulates that carbon filament incandescent will be used; on three and five year contracts the company agrees to furnish tungsten lamp. No figures were submitted for a 10-year contract as called for in the advertisement, the Public Service offer containing the statement that it had been advised by counsel that it would be illegal for the town to enter into a contract for that period. At present the town is using 581 incandescent lamps and three arcs at a flat rate of \$15 per year for the former lights and \$100 per annum for the latter. In the new offer the company stipulated that after January 1, 1910, no free lights would be allowed the town. Under the present contract the town is allowed about forty free lights in the municipal building.

**Canal Dover, O.**—Harry Saxbe, Urbana, has secured contract to construct an electric light plant here to cost about \$35,000.

**Guthrie, Okla.**—The new light ordinance has passed which provides for 32 additional lights for fifteen years at \$6 a month. The Light and Power Company agreed to pay the city \$3,500 within the next five days in lieu of building the West Side standpipe.

**Northumberland, Pa.**—Edison Electric Illuminating Co. has been awarded contract by the Eyre-Shoemaker Co., contractors, to furnish 60 arc lamps and 500 incandescent lamps in connection with the contract for construction of classification yards.

**Luray, Va.**—Lane Bros. have secured contract to construct a concrete dam across Shenandoah River one mile from Luray.

**Montpelier, Vt.**—The Cory-Deavitt-Frost Co. has awarded contract to D. W. Cooley, of Waterbury, for building an additional dam about 2,000 ft. above the present plant at Kinney's mills in East Montpelier; cost about \$35,000.

**St. Albans, Vt.**—Bids for furnishing light for the streets and public buildings of the city, which were received from the Vermont Power & Manufacturing Co. and the St. Albans Gas Light Co., were opened, but as they proved unsatisfactory they were referred back to the Committee on Lights for a conference with the companies. The town of Swanton, which some time ago had signified its intention to bid for the lighting contract, was not heard from.

**Washburn, Wis.**—Ashland Power Co., Ashland, has secured contract to furnish power to the city; line will be built from dam at White River.

### FIRE EQUIPMENT

**Birmingham, Ala.**—Fire Department will purchase 5,000 ft. of hose.

**Ensley, Ala.**—Fire Committee has recommended purchase of an auto engine.

**San Diego, Cal.**—Pacific Beach residents have asked for fire protection; hose reel and 700 ft. of hose may be purchased.

**San Francisco, Cal.**—Ingleside Improvement Club is urging purchase of a chemical engine for district.

**Hartford, Conn.**—East Hartford Fire District is considering installation of a steam siren as signal for fire; cost \$2,700.

**Southport, Conn.**—City is considering purchase of a chemical engine.

**Wilmington, Del.**—Fire Department is considering purchase of an automobile engine.

**Washington, D. C.**—Commissioners have \$5,500 available for fire department purposes; efforts will be made to procure motor engine that will come within appropriation.

**Boca Grande, Fla.**—Wall & McKay have invited bids for erection of two-story brick fire station.

**Covington, Ga.**—City will organize and equip Fire Department.

**Twin Falls, Ida.**—Council has accepted plans of Burton E. Morse for fire house

and council rooms; cost \$4,000.

**Bartonville, Ill.**—Village has voted to purchase hose cart.

**Belleville, Ill.**—Fire and Water Committee will purchase 1,000 ft. of hose.—G. H. Beineke, City Clerk.

**Mansfield, Ill.**—City will purchase quantity of hose.

**New Albany, Ind.**—City will purchase hose at cost of \$1,100.

**Hutchinson, Kan.**—City Commissioners are considering purchase of an auto for Fire Chief A. C. Stout; cost about \$1,000.

**Haverhill, Mass.**—Council has voted to erect small fire station at Ward Hill.

**Lenox, Mass.**—City will erect and equip fire station this fall.

**New Bedford, Mass.**—Fire Chief Dahill will recommend purchase of auto engine of Webb type, 2,200 ft. of hose and 12 alarm boxes.

**Calumet, Mich.**—City is considering erection and equipment of fire station.

**Mapleton, Minn.**—Village is considering purchase of fire hose.

**Winona, Minn.**—City is considering purchase of hose truck for station No. 3.

**Omaha, Neb.**—Installation of auto fire apparatus is being considered.

**Tonopah, Nev.**—City will install fire alarm system.

**Atlantic City, N. J.**—Purchase of fire boat is being considered.

**Bayonne, N. J.**—City will purchase 4,500 ft. of hose.

**Camden, N. J.**—Council has authorized \$20,000 bonds for erection of fire house.

**Clayton, N. J.**—Citizens are considering erection and equipment of truck house.

**Long Branch, N. J.**—West End Fire Co. is raising funds for erection of fire house.

**Perth Amboy, N. J.**—Citizens of Upper State st. and Hall ave. have petitioned Council to furnish them with fire truck and other supplies.

**Pettzburg, N. J.**—Palisade Township Fire District has rejected all bids for completion of engine house.—C. J. Zullig, Secretary.

**Uriton, N. Y.**—Volunteer fire department will be organized and equipped.

**Belpre, O.**—Fire Department will be organized and equipped.

**Dayton, O.**—City will consider ordinance appropriating \$1,000 to build tower at 5th and Brown sts. for old fire bell.

**Tulsa, Okla.**—City will erect fire station; cost \$10,000.

**Altoona, Pa.**—Residents of Eighth and Second wards are urging erection of engine house on hill top.

**Chester, Pa.**—Ridley Park Hose Co. is considering purchase of 100 ft. of hose.

**Clifton Heights, Pa.**—Fire Committee is considering sale of chemical engine; proceeds will be used either for purchase of hose or purchase of two small chemical engines.

**New Brighton, Pa.**—Borough Council has ordered bids advertised for hook and ladder truck.

**Scranton, Pa.**—Mayor John Von Bergen, Jr., has signed ordinance authorizing plans for engine house in Seventh Ward.

**Austin, Tex.**—Citizens of North Austin are urging purchase of engine.

**Galveston, Tex.**—Fort Crockett will soon advertise for bids for erection of engine house.

**Houston, Tex.**—Fire Department will erect two fire stations.

**Murray, Utah.**—Council has passed resolution authorizing purchase and installation of fire alarm apparatus.

**Tacoma, Wash.**—Council has allowed Chief McAlevy \$10,000 to build temporary fire station on Tidelands and equip it with hose wagon; also allowed appropriations for auto hose wagon and for car for Chief.

**Tacoma, Wash.**—Fire Chief McAlevy has asked for \$314,325 to run his department during 1910; \$81,000 is asked with which to build two engine houses; \$20,850 for equipping and maintaining engine house No. 11, and \$12,860 for equipment and house for No. 8; \$2,500 for Chief's auto and \$5,000 for hose wagon.

### BIDS RECEIVED AND CONTRACTS AWARDED

**Fort Smith, Ark.**—The Board of Affairs has closed contracts for the purchase of 2,500 ft. of hose, buying 1,250 ft. of one firm at 95½c. per ft. and an equal amount of another firm at 82c.

**San Francisco, Cal.**—The Board of Public Works has awarded a contract to Charles C. Moore & Co. for furnishing the steel specials needed for the auxiliary fire system; there are 2,378 tons of these, for which the city will have to pay \$332,976.

A contract was also let to Lange & Bergstrom for completing the corporation yard of the Fire Department on Francisco st.; the price to be paid is \$36,757.

**Jacksonville, Fla.**—Bids for supplying the city with 2,000 ft. of 2½-in. hose and 1,000 ft. of 3-in. hose, for use by the Fire Department, were as follows:



United and Globe Rubber Manufacturing Company—2,000 feet 2½-inch Globe hose at 68 cents per foot, net, f. o. b., same guaranteed at 400 pounds pressure, and free from defects.

Boston Woven Hose and Rubber Company—2½-inch internal diameter, Foss and Firejacket brand, at 90 cents per ft. Guaranteed at 400 pounds pressure, and 36 months' service. Perfection brand at 90 cents per foot; Bay State jacket at 80 cents per foot; Paramount jacket at 75 cents per foot. For 3-inch hose, quotations by this company were as follows: Boston fire-jacket at \$1.10 per foot; Bay State jacket at \$1.05 per foot; Paramount jacket, at 95 cents per foot.

Biddle Fabric Fire Hose Company—Three-inch internal diameter, f. o. b., \$1.10 per foot. Four hundred pounds pressure guaranteed; 10 per cent. jobbers' discount; terms to suit city. Two and a half inch Maybeth brand, 90 cents per foot; Horse shoe brand, 90 cents per foot.

S. B. Hubbard Company—Two and a half inch Dragon brand, \$90 per 100 feet; Bulkan brand, \$80 per 100 feet; Lenox brand, \$82 per 100 feet. Three-inch Dragon brand, \$116 per 100 feet; Lenox, \$105 per 100 feet.

New Jersey Car Spring and Rubber Company—Three-inch hose at \$1.07½ per foot. This hose is multiple cotton woven brand, guaranteed at 400 pounds pressure and 36 months' service. Two and a half-inch internal diameter hose at 82½ cents per foot.

C. C. C. Fire Hose Company—Two and a half-inch Canton brand, 90 cents per foot; C. C. C. Multiple woven brand, 90 cents per foot; Bunker Hill brand, 85 cents per foot; Stand Fast brand, 80 cents per foot. Three-inch Canton brand, \$1.25 per foot. This concern stated it would allow 6 per cent. rebate for cash payment for 2½-inch hose, and 7 per cent. for cash for 3-inch hose.

Eureka Fire Hose Manufacturing Company—Two and a half-inch Solid Multiple brand, \$1 per foot; Helmet brand, 90 cents per foot; Eagle brand, 85 cents per foot; Trumpet jacket, 80 cents per foot; three-inch high-grade Eureka, \$1.45 per foot; Paragon, \$1.35 per foot; Loose Jacket Peerless, \$1.15 per foot.

The board awarded to the Biddle Fabric Fire Hose Company the contract for furnishing 1,000 feet of 3-inch hose at \$1.10 per foot, less 10 per cent. jobbers' discount. This makes the hose cost 99 cents per foot. This same concern also secured the contract for furnishing 1,000 feet of 2½-inch hose at 90 cents per foot, less 10 per cent. jobbers' discount, of 81 cents. To the New Jersey Car Spring and Rubber Company, represented in city by the J. G. Christopher Company, was awarded the contract for furnishing 1,000 feet of 2½-inch hose at 82½ cents per foot, net, f. o. b.

Boston, Mass.—The Mayor has authorized Fire Commissioner Parker to award Martin Flynn a contract to build a fire station at Forest Hills for something more than \$20,000; Flynn was the lowest bidder when bids were opened for the work some weeks ago, but his figure was above the appropriation and he reduced his original figures.

Lawrence, Mass.—The American La France Company, of Elmira, N. Y., has been awarded contract to build the aerial ladder truck for the West Centralville fire house for \$4,300; the combination hose wagon for the same fire station will be built by the Combination Wagon Co., of Providence, this company being the lowest bidder out of the three competitors, at \$443.

New Bedford, Mass.—There was but one bid in for furnishing three 10-foot lengths of knit suction hose, and that was from the Cornelius Callahan Co., of Boston, whose figures were \$1.10 per foot and 85 cents per end for attaching couplings; contract was awarded the company.

Newburgh, N. Y.—The Fire Committee received bids for the erection of the addition to the house of Washington Steamer Co.; James Todd offered to do the work for \$3,439, and Whitfield Crevling bid \$3,650; the contract was awarded to Mr. Todd.

Peekskill, N. Y.—The Webb Company has been awarded contract for an automobile fire engine for Columbian Engine Co. at \$7,500, including a deluge set.—President Smith, Board of Village Trustees.

Dallas, Tex.—For furnishing 28,000 ft. of fire hose the following bids were submitted: Eureka Fire Hose Mfg. Co., 80c. to \$1.10; Ben F. Wolfe, for the Chicago Fire Hose Co., 80c. to 90c.; Fabric Fire Hose Co., 80c. to \$1.10.

## ELECTRIC RAILWAYS

Phoenix, Ariz.—H. P. DeMund, W. D. Fulwiler and Elliot Evans are interested in project to construct belt electric railway to connect with new extension of the Indian School car line of Phoenix Railway and also a loop of 12 miles.

Long Beach, Cal.—Board of County Supervisors has granted Pacific Electric Rail-

way, Los Angeles, franchise for an electric railway on East 7th st.

Los Angeles, Cal.—City has granted Pacific Electric Railway franchise for line along 6th st.

Oakland, Cal.—Oakland & Antioch Railway Co. has authorized raising of funds with which to construct an electric railway from Oakland to Antioch via Walnut Creek, Concord and Bay Point.—A. W. Maltby is interested.

San Diego, Cal.—Council has received petition from San Diego, El Cajon & Escondido Railroad Co. for electric railway franchise to enter San Diego.—G. W. Pursell, General Manager.

San Francisco, Cal.—Public Utilities Committee of the Board of Supervisors has agreed to recommend passage of ordinance requiring street car companies to equip their rolling stock with fenders.

San Jose, Cal.—Work will be begun at once by Peninsular Railway Co. on construction of electric railway from San Jose north to Stanford University; distance 17 miles.

Santa Barbara, Cal.—Santa Barbara Consolidated Railway Co. has petitioned for an additional franchise in this city.

Visalia, Cal.—The Visalia Electric Railroad is considering extension of line from Lemon Cove to Three Rivers.

Mayfield, Cal.—Board of Trustees has granted Peninsular Railroad, San Jose, franchise for an electric railway.

Carmi, Ill.—Carmi & Fairfield Traction Co. will be chartered to construct an electric railway connecting Carmi, Sumpter, Liberty and Fairfield; distance of about 25 miles.—E. S. Lawrence, St. Louis, Mo., Chief Engineer.

Hampton, Ill.—Town has granted 20-year franchise to Tri-City & Northeastern Interurban Railway Co., Port Byron.—J. W. Simonson, Port Byron, President.

Indianapolis, Ind.—Indiana Northwestern Traction Co. has been incorporated to construct electric railway from Hammond to Lafayette via intermediate towns.—William Buckner, C. D. Meeker, Jacob D. Timmons, Monticello; Geo. W. Goff, Rensselaer, and Geo. A. Haskell, Chicago, Ill., Directors.

Monticello, Ind.—Tippecanoe & Monticello Interurban Railway has been incorporated to construct and operate a system of interurban railways to connect Fowler, Lafayette, Battle Ground, Ash Grove, Delphi, Brookston, Chalmers, Wheeler, Reynolds, Monticello, Norway, Idaville, Burnettsville, Buffalo and Logansport.—Thos. W. O'Connor, Willis White, Monticello; Chas. E. Turner, Detroit, Mich.; Jos. A. C. Blackburn and Wm. B. Felker, Rogers, Ark., Incorporators.

South Bend, Ind.—Officers of Vandalla line are planning to operate South Bend-Terre Haute division, distance 275 miles, by electricity.

Ogden, Ia.—Fort Dodge, Des Moines & Southern Interurban Co. will soon commence construction of line to Fraser Junction.

Glasgow, Ky.—Charles Vandenberg is securing necessary franchises and right-of-way for electric railway to connect Glasgow and Horse Cave; distance 18 miles.

Battle Creek, Mich.—Post Land Co. has applied to Board of Supervisors for franchise to construct and operate an electric railway through its property; length about six miles.—H. C. Hawk, Representative.

Escanaba, Mich.—Escanaba Traction Co. is considering extension of interurban to Rapid River.

Breckenridge, Minn.—Citizens have voted to grant a franchise for street car line to Wahpeton, N. D.

St. Louis, Mo.—County Court has granted James D. Houseman franchise to construct electric railway from Jefferson Barracks to Spanish Lake; franchise provides for branch lines to Fenton and other towns which have no transportation facilities.

Springfield, Mo.—Springfield Traction Co. has completed surveys for extension to Carthage; construction work is to be started shortly.—W. A. Bixby, General Manager.

Fremont, Neb.—Des Moines, Council Bluffs & Western Railway Co. has closed negotiations for right-of-way for lines to Omaha.

South Amboy, N. J.—South Amboy City Council has granted franchise to Jersey Central Traction Co., allowing them to proceed with their proposed trolley line through South Amboy to Perth Amboy.

Clovis, N. M.—Council has granted 30-year franchise to a St. Louis syndicate to construct and operate an electric street car system in Clovis; work is to begin within twelve months and three miles of track is to be in operation within fifteen months; company is represented by E. J. Howard.

Elmira, N. Y.—Council has granted Elmira Water, Light & Railroad Co. franchise to extend lines to city limits.

Jamestown, N. Y.—Jamestown Street Railway System is considering extension

of a line to Randolph via Falconer, Levant and Kennedy.

Painted Post, N. Y.—New road is proposed between Corning and this village to connect with Brewster st. and bringing Cutler Creek to pass through the Fuller, Reynolds, Pritchard and Kingsbury farms to Corning, where road will enter Dodge ave. after running parallel to West Fultoney st.—Charles A. Reynolds is interested.

Seneca Falls, N. Y.—The Geneva & Auburn Railway is planning to build extension to Cayuga Lake; cost \$50,000.

Dayton, O.—Fifty-year franchise to operate on Cincinnati pike from the west corporation line of village of Oakwood to suburb of Carmonite has been granted to Dayton Street Railway Co. by County Commissioners.

Sulphur, Okla.—Citizens are urging construction of local and suburban railways.

Portland, Ore.—The Portland Railway, Light & Power Co. is planning extension of line from Milwaukee to Clackamas Station.

Harrisburg, Pa.—Bedford, Fulton & Franklin Street Railway Co. has been granted franchise for new electric line.

Warrior Run, Pa.—Town Council has passed ordinance authorizing Hanover & Warrior Run Street Railway Co. to lay tracks and operate street railway on certain streets.

West Newton, Pa.—Manning Stires, representing the Pittsburg, McKeesport & Westmoreland Railway Co., has presented ordinance for privilege of use of certain streets in Borough for a proposed line connecting West Newton with town of Herminie in Sewickley Township.

Olivet, S. D.—L. F. Phillips is interested in movement to construct an electric railway to Scotland.

Chattanooga, Tenn.—W. Divine has been granted extension of time limit on franchise granted by the government to build an electric line through Chickamauga Park; under provisions of extension he is granted nine months in which to begin work and in addition 18 months in which to complete the line.

Austin, Tex.—Secretary of State has received charter of Fort Worth, Mineral Wells & Western Railroad Co., interurban line, which proposes to build from Fort Worth northwest through Tarrant, Parker and Palo Pinto counties to Mineral Wells, thence northwest to Roswell, N. M.; James A. Watkins and J. A. Hanford, of Arkansas and Paul Hurley and L. C. Cole, of Fort Worth, are incorporators.

Haskell, Tex.—M. R. Hemphill has made formal application to City Council for franchise to build a street car line.

Richmond, Va.—Charter has been issued to Newport News & Yorktown Railway Corporation, which proposes to build railroad from Newport News to Yorktown; distance 20 miles; capital \$25,000.—W. T. Chapin, President, Newport News; Alvah H. Martin, Vice-President, Norfolk county; C. P. Jones, Secretary and Treasurer.

Charleston, W. Va.—The Kanawha Valley Traction Co. has filed application for franchise to build, maintain and operate street car line on Russell st.—J. S. Ross, Recorder.

Madison, Wis.—Chicago & Wisconsin Valley Railway has been organized to construct line north of Tomahawk.

Milwaukee, Wis.—Street Railway Co. is considering construction of a line to Holy Cross Cemetery.—J. D. Beggs, General Manager.

## BIDS RECEIVED AND CONTRACTS AWARDED

Missoula, Mont.—Clinton & Rumelhart, contractors of Missoula, have been awarded contract to construct the Clark electric railway grade between Pine st. and East Missoula, a distance of about two and one-half miles. Milberry & Weaver, local railroad sub-contractors, drew the award for the construction of two trestles, one at East Missoula and another to span the Rattlesnake River. It is understood that the street railway company will lay its own steel when the grading is finished.

Mercer, W. Va.—Mercer Elec. Ry. Co. has let contract for grading its line from Mercer to Bluefield to Peck & Brown.

## BRIDGES

Birmingham, Ala.—City will consider ordinance providing for construction of viaduct on 23d st. and one on 1st ave.

Los Angeles, Cal.—Board of Supervisors has decided to construct bridge over Los Angeles River near Lankershim.

Aurora, Ill.—Highway Commissioners will open bids at once for concrete bridge across Mahaney's hollow; cost \$700.

Wilmette, Ill.—Sanitary District of Chicago has adopted plans for construction of a new bridge over North Shore Channel; structure will be 216 ft. long, 62 ft. wide and will be built of concrete.

**Indianapolis, Ind.**—County Surveyor Julian has submitted to County Commissioners budget for bridges to be constructed in Marion county next year: there are 46 bridges and culverts in the list, with a total cost of approximately \$244,000; most important item of expenditure will be that of bridge across Fall Creek at Delaware st.; cost \$100,000; other bridges included in the budget are for Little Eagle Creek at West Washington st., cost \$30,000, and another at Iowa and Ringgold sts.; cost \$20,000.

**Council Bluffs, Ia.**—Plans have been prepared for erection of bridge at Benton and 8th sts.

**Natchitoches, La.**—Police Jury has accepted plans and specifications for proposed bridge over Black Lake; length 2,752 ft.

**New Orleans, La.**—City will soon invite bids for construction of bridge over Orleans Canal.—W. J. Hardee, City Engineer.

**Salisbury, Md.**—Iron bridge will be erected across Humphriesville dam.

**St. Joseph, Mich.**—Bridge Committee will extend revetment on west side of the highway bridge.—W. J. Cleary, City Engineer.

**Butte, Mont.**—Northern Pacific is considering erection of steel viaduct over Harrison ave.

**Great Falls, Mont.**—County Commissioners will erect several bridges between Monarch and Neilhart.

**Nashua, N. H.**—Council will be asked to authorize Board of Public Works to unite with Town of Hudson and the Boston & Northern Street Railway in the construction of a new bridge over the Merrimack River.

**Caledonia, N. Y.**—Taxpayers of Avon and Caledonia will vote on erection of bridge across Genesee River; cost \$9,000.

**Akron, O.**—Plans are being prepared by City Engineer for reinforced concrete viaduct in Bowery st.; cost \$25,000.—C. H. Water, Chairman Board of Public Service.

**Mt. Gilead, O.**—Morrow County Board of Commissioners has rejected all bids for superstructure of the Jinkins bridge.

**Mt. Vernon, O.**—Knox County Board of Commissioners is considering constructing bridge over Dry Creek.

**West Union, O.**—Bids will be received September 17, noon, by Board of County Commissioners for construction of a bridge substructure and superstructure over Long Lick.—S. S. Jones, County Auditor.

**Bartlesville, Okla.**—W. D. Todd, Warren, Pa., is interested in construction of two bridges on route of proposed road from this city to Pryor Creek.

**Cherokee, Okla.**—County Commissioners are considering construction of steel bridge across Salt Fork River.

**Pittsburg, Pa.**—Citizens are urging that county build double-deck bridge from 6th ave. and Forbes st. across the Monongahela River to 3d and Carson sts., to connect with proposed tunnel running through Mount Washington under Bailey ave. to Haberman ave. and Pasadena st. near Washington ave.

**Providence, R. I.**—Taxpayers will consider erection or repair of bridge over Ten Mile River on Roger Williams ave. in Phillipsdale.

**Memphis, Tenn.**—Commissioner H. T. Bruce and others are urging that Southern Railway be compelled to abolish its grade crossings and construct viaducts over eight or ten important streets.

**Fort Worth, Tex.**—Missouri, Kansas & Texas road will aid in erection of viaduct over tracks at Allen ave.

**Houston, Tex.**—Fifth Ward citizens are urging erection of viaduct across tracks of Southern Pacific on North Side.

**Georgetown, Wash.**—Council has decided that proposed bridge will be located at Alki st.; cost \$20,000.

**Hcquiam, Wash.**—City will erect bridge over canal on 9th st.

**Mount Vernon, Wash.**—County is considering erection of four steel bridges.

**Spokane, Wash.**—Spokane Traction Co. will at once erect wooden bridge on site of recently burned structure on Boone ave.

**West Seattle, Wash.**—Plans are being considered for proposed West Seattle viaduct; cost \$1,500,000.

#### BIDS RECEIVED AND CONTRACTS AWARDED

**Augusta, Ga.**—Contracts for superstructure of bridge across east branch of Penobscot River in the town of Medway, Penobscot Co., and for bridge across the Aroostook River in town of Masardis, Aroostook Co., have been awarded to American Bridge Co., while the masonry work on both the bridges has been awarded to Reed, Steward & Blunt, of Skowhegan.

Bids on the superstructure on the Medway bridge were as follows: American Bridge Company, \$13,140; Boston Bridge Works, \$13,699.

Bids on the masonry part of the Medway bridge were as follows:

Leslie & Maher, of Millinocket, first-class masonry, \$15 per cubic yard; concrete masonry, \$15 per cubic yard; excavation under water, \$1.50 per cubic yard.

Reed, Steward & Blunt, of Skowhegan, first-class masonry, \$14.50 per cubic yard; concrete masonry, \$8.50 per cubic yard; excavation under water, \$2 per cubic yard.

On these prices the cost of the work figures as follows according to the plan which has been worked out by the State Highway Department: Superstructure, 2,170 feet steel spans, \$13,140; one pier, 165 cu. yds., at \$14.50 per cu. yd., \$2,392.50; two abutments, 280 cu. yds., at \$8.50 per yd., \$2,380; approaches, 1,100 yds. of filling, \$500; engineering and superintendence, \$900; total, \$19,312.50.

Bids on superstructure for the highway bridge at Masardis were as follows: American Bridge Company, \$7,680; Boston Bridge Company, \$8,848.

Following bids were received on the masonry work:

Reed, Steward & Blunt, of Skowhegan, first-class masonry, \$10.66 per cu. yd.; one of cement, three of sand and six of gravel, \$8.50 per cu. yd.; on excavation under water, \$2 per cu. yd.

The New England Contracting Co., of Worcester, Mass., second-class masonry, \$8.87 per cu. yd.; on concrete, \$8.87 per cu. yd.; on excavation under water, \$1 per cu. yd.

**Joliet, Ill.**—Bloomington, Pontiac & Joliet Ry. Co. has awarded contract for constructing three reinforced concrete bridges on the line between Pontiac and Chenoa to Burnham & Ives, Bloomington, for \$20,000.

**Quincy, Ill.**—The Highway Commissioners of Melrose Township have awarded contract for some repairs that are to be made to Wagner bridge, over Mill Creek, on the South 24th st. road, to Van Dusen & Turner, of Keokuk, Ia., for \$589.

**Garnett, Kan.**—The County Commissioners have awarded to the Topeka Bridge Company the contract for three concrete and one steel bridge in this county; total cost, \$10,500.

**Owensboro, Ky.**—The Daviess County Fiscal Court has awarded a contract to the Vincennes Bridge Company to construct a bridge over Panther Creek between here and Masonville.

**Youngstown, O.**—Board Public Service has awarded contracts for constructing the Spring Common Bridge as follows: Structural work to Ft. Pitt Bridge Co., Pittsburgh, \$59,060; and masonry and grading to Thos. Lightbody for \$25,497.

**Tishomingo, Okla.**—The County Commissioners awarded contracts for the construction of twenty-four large steel bridges throughout the county, at a total cost of \$62,211; the Midland Bridge Company, of Kansas City, Mo., the Missouri Valley Bridge and Iron Company, of Leavenworth, Kan., and the Kansas City Bridge Company, of Kansas City, Mo., were the successful bidders.

**Chambersburg, Pa.**—The County Commissioners reconsidered the matter of the repairing of the Fannettsburg bridge and have given the contract to Wm. H. Murphy, of this place, at his bid of \$1,465.

**Pottstown, Pa.**—County Commissioners have awarded contract to Willauer & Co., city, for bridge of concrete to be constructed on High st., at \$4,577; structure will have two arches, will be 30 ft. long and will be 80 ft. wide. Other bids were as follows: James Smith, \$7,663; Missimer & Wall, \$7,573; Toledo-Massillon Co., \$6,780.

**Marysville, Utah.**—The J. M. Kelly Co. has been awarded contract for building bridge over the Sevier run.—Caleb Tanner, State Engineer.

**Peterboro, Ont., Can.**—George A. Berg, St. Catharines, has secured contract for constructing bridge for \$28,000.

#### MISCELLANEOUS

**Los Angeles, Cal.**—Board of Public Works has applied to Council for authority to purchase another power oil sprinkler to lay dust in city streets; cost \$900.

**Los Angeles, Cal.**—City will advertise for bids for police station to be erected on West Jefferson st.

**San Francisco, Cal.**—Mission Promotion Association is urging improvement of Holly Park.

**Chicago, Ill.**—Chief Steward is considering introduction of 15 motorcycles into police department.

**Bloomfield, Ind.**—Architects Herbert L. Bass & Co., Indianapolis, have prepared plans for a two-story \$25,000 jail.

**Davenport, Ia.**—Police Committee is considering purchase of a patrol.

**Baton Rouge, La.**—Two tracts of land have been offered to city for park purposes.

**Baltimore, Md.**—Harbor Engineer Lackey will ask General Assembly for enabling act

permitting city to borrow \$50,000,000 to improve harbor facilities.

**Minneapolis, Minn.**—Architects Long, Lamoreaux & Long have prepared plans for pavilions to be erected by Park Board.

**Minneapolis, Minn.**—Chief of Police has recommended installation of a new police signal service; cost \$8,500.

**Maplewood, Mo.**—City is considering erection of City Hall.

**St. Louis, Mo.**—Architect Isaac S. Taylor has prepared plans for a five-story jail.

**St. Louis, Mo.**—Board of Police Commissioners will erect a three-story \$50,000 police station.—J. A. Smith, Architect.

**Butte, Mont.**—Health Committee will investigate proposition of an incinerating plant.

**Nashua, N. H.**—City has awarded \$46,000 municipal bonds to Sinking Fund Commissioners at par.

**Harrison, N. J.**—Council will ask Hudson County Park Commission to purchase plot of ground near Davis and Central aves. for park purposes.

**Mount Holly, N. J.**—Burlington County will consider erection of new jail.

**Newark, N. J.**—Board of Freeholders has appropriated \$20,000 for Hospital for Contagious Diseases.

**Plainfield, N. J.**—Mayor Fisk will appoint commission to investigate subject of playgrounds.

**South Amboy, N. J.**—City will repair public dock at foot of Henry st.

**Trenton, N. J.**—Committee on Parks is considering purchase of park site at Brunswick ave. and Princeton pike.

**Ventnor, N. J.**—Councilman H. J. Shumway is urging erection of public pier.

**Roswell, N. M.**—Chaves County has voted \$125,000 jail and court house bonds.

**Alliance, O.**—Board of Service has asked Council to permit issuance of \$40,000 bonds for a city hall.—C. E. Swearingen can be addressed.

**Covington, O.**—Citizens are urging erection of market house as central as possible.

**Blackwell, Okla.**—Owen & Payson, Kansas City, have prepared plans for a City Hall and jail.

**Bellevue, Pa.**—City has awarded \$25,000 borough hall bonds to E. S. Wheeler at \$110.8713.

**Butler, Pa.**—Secretary of Council Coulter has recommended that town should collect as well as burn all garbage.

**Johnstown, Pa.**—Bids for purchase of motor police patrol have been rejected as excessive; appropriation \$3,000; large appropriation will be asked.

**Chattanooga, Tenn.**—Park Commission has rejected all bids for the construction of the Boynton Park pavilion as being excessive.—Dr. S. B. Cook, Chairman.

**Fort Worth, Tex.**—Park Expert George Kessler, Kansas City, has prepared plans for park system; City Commission will consider improvement of park site in North Fort Worth.

**Galveston, Tex.**—County Commissioners' Court and City Commission are considering proposed plans affecting construction of groins and revetments to restore and maintain Galveston beach.

**Hillsboro, Tex.**—Site at corner of Franklin and Church sts. has been selected for proposed City Hall.

**Waco, Tex.**—City will establish two parks; sites are being secured in other parts of city for similar use.

**Salt Lake City, Utah.**—County has purchased land as site for larger jail.

**Tacoma, Wash.**—Council has allowed appropriation for automobile for H. J. McGregor, Commissioner of Public Works.

**Tacoma, Wash.**—Council has appropriated \$40,000 for garbage incinerator.—Dr. Jas. La Gas, Health Officer.

**Racine, Wis.**—Council has directed Board of Public Works to prepare plans for public comfort station at Main st. bridge.—P. H. Connolly, City Engineer.

#### BIDS RECEIVED AND CONTRACTS AWARDED

**Fort Smith, Ark.**—The Board of Affairs received but one bid for furnishing a patrol wagon and that was too high, \$900. The matter was placed in the Police Committee for assisting in the selection.

**Sacramento, Cal.**—Two firms offered crushed rock to be used in the re-inforced concrete cells in the penitentiary at San Quentin; about 10,000 cu. yds. are required; the Healy-Tibbitts Construction Company offered to deliver the rock for \$1.22 a cu. yd., while the San Francisco Quarries Company gave \$1.149 as its bid; these will be taken under advisement.

**Jacksonville, Fla.**—The Cheatham-Alderman Co., city, has been awarded contract for making winter uniforms for the Police Department. The company placed the lowest bid.

**Chicago, Ill.**—Contract for the new street-car tunnel by way of LaSalle street under



the river to replace the one which has been abandoned for several years has been let by the Chicago Railways Company to M. H. McGovern, the contractor who held the city's asphalt street repair contract last year. The bidders on the work were: M. H. McGovern & Co., \$1,166,421; George W. Jackson, Inc., \$1,339,000; Empire Construction Company, \$1,594,605; Great Lakes Dredge and Dock Company, \$1,686,175. A bond of \$250,000 is filed to guarantee that the work shall be completed in 400 days; some of the other bidders wanted as high as 900 days; the tunnel will be of twin-bore pattern, constructed of re-inforced concrete; it will be 39 feet wide, 2,014 feet long, and at its greatest depth sixty feet below street grade. Separate bores are expected to improve its ventilation.

**Indianapolis, Ind.**—Bids were received for the erection of a Carnegie branch library in Germania ave., the lowest bid being \$14,190, submitted by Albert von Spreckelsen. The lowest bids for plumbing and a heating plant in the building were submitted by George W. Kayser, being, \$250 and \$974, respectively.

**Baltimore, Md.**—Joseph Osborn has been

appointed garbage remover for Roland Park at \$2,400 per year.

**Boston, Mass.**—The Finance Commission has called upon the Bath Department Trustees to award to the lowest bidders contract for the East Boston gymnasium, reversing the action of the Trustees in giving the contract to the second lowest bidder some time ago; the work calls for an expenditure of about \$20,000, and the lowest bidders were Mack & Moore.

**Boston, Mass.**—Only one bid was opened by the Harbor and Land Commissioners for building 280 ft. of concrete sea wall at North Scituate, Rendle & Stoddard, Boston, bid \$5 a lin. ft., and as the appropriation is \$1,500, they will receive the award.

Three bids were opened for digging a channel of six feet at low water from the mouth of Lobster Cove, Annisquam, to the Annisquam River. Jeremiah P. Riordan bids 20 cents a yard for removing shoal 4, 22½ cents for removing other shoals and 22½ cents for dredging. The Eastern Dredging Co. bids \$1.080 a scow for removing shoal 4, 27.7-10 cents a yard for other shoals, and 23 cents a yard for dredging. J. R. Burke bids \$1.450 a scow for shoal 4, 32.4-10 cents a yard for item

2 and 31 4-10 cents for item 3. The appropriation for the work is \$10,000.

**Gloucester, N. J.**—Bids for cleaning the streets for the next twelve months were read as follows: John Butler, \$325 per month; John J. Denenry, \$300 per month; Harry Morrissey, \$400 per month; James D. Flexon, \$290 per month.

**Nashville, Tenn.**—Bids for the construction of a concrete block retaining wall for 16th ave. were received as follows: John T. Southgate, \$192; Hoover & Co., \$145; J. E. LeSueur & Co., \$141.

Bids on a brick culvert on Capers ave. were as follows: Sullivan & Hagerty, \$597.82; J. J. Barnesfield, \$403.60; J. A. Webb, \$600; Quinn & Ellis, \$637.35; T. V. Barnesfield, \$649.10; Curtis & LeSueur, \$745.

**Galveston, Tex.**—The A. M. Blodgett Construction Company has contracted with the Galveston, Harrisburg & Houston Transportation Company for the gravel necessary to the construction of the Galveston causeway; between 60,000 and 75,000 yards of this material will be used.

**Chehalis, Wash.**—Council has let contract for erection of City Hall to the Denhof Construction Company, city, for \$10,999.

## TOO LATE FOR CLASSIFICATION

### STREET IMPROVEMENTS

**Ft. Smith, Ark.**—Streets and Alleys Committee will investigate expense of paving city alleys with macadam.

**Tuscaloosa, Cal.**—Council has ordered paving of Eighth st.—D. B. Robertson, City Clerk.

**Silverton, Col.**—Bids will be received until noon, Sept. 20, for construction and repairs of wagon road, from Silverton to Creede, seven miles northwest of Silverton.—C. W. Comstock, Denver, State Engineer.

**Ft. Oglethorpe, Ga.**—Bids will be received until 11 A.M., Sept. 29, for constructing walks necessary for new buildings.—Capt. M. W. Rowell, Constructing Quartermaster.

**Marshall, Ill.**—Board of Local Improvements will receive bids Sept. 28, 2 P.M., for 13,648 sq. yds. vitrified brick paving; Portland cement filler; also 8,000 lin. ft. combined curb and gutter.—W. R. Paige, Terre Haute, Ind., Consulting Engineer.

**Leavenworth, Kan.**—City Commissioners' plans for next year include curbing of 16 streets, paving of eight streets and curbing and paving of three streets.

**Baltimore, Md.**—State Roads Commission has rejected all bids for improving about 4½ miles of road in Washington county; survey will be made for improving road from Conowingo bridge to Calmia.

**Grant, Mich.**—Bids will be received until noon, Sept. 18, for constructing from one to seven miles of gravel road.—Geo. Osborn, Clerk, Grant Township.

**Duluth, Minn.**—County Board has appropriated \$2,400 for improvement of roads in Fifth Commissioner's district.

**Eveleth, Minn.**—City Engineer will draw plans and estimates for new rock crushed paving to be put on Grant ave. this fall.

**Neresen, Minn.**—Bids will be received until 2 P.M., Sept. 21, for grading three and a half miles of road.—Hans Christensen, Garland, Clerk Town Board.

**Concord, N. H.**—Governor H. B. Quincy and Council have selected routes of East Side boulevard and Merrimack River State highway; route is direct one from Rochester to Conway via Milton, Wakefield, Ossipee and Madison.

**Newark, N. J.**—Board of Freeholders has accepted specifications for reconstruction of Plank road.

**Orange, N. J.**—Sealed proposals will be received by Jos. A. Birkholz, Chairman of Committee on Streets, at office of City Clerk, until 5 P.M., Sept. 20, for constructing concrete sidewalks on Main st., from East Orange to West Orange line. Bond double amount of bid. Specifications at office of City Engineer, Orange National Bank Bldg.

**Roosevelt, N. J.**—Street Commissioner will purchase 800 tons of stone to complete Rahway ave. improvement.

**Jefferson, O.**—Bids will be received until 1 P.M., Sept. 30, for grading, draining, curbing and macadamizing Walnut st., from Ohio ave. to Union st., Saybrook Township, a distance of 2,295 ft.—J. S. Matson, County Surveyor.

**Youngstown, O.**—Bids will be received by Board of Public Service until noon, Sept. 17, for paving Emerson Place.—W. H. McMillin, Clerk.

**Sayre, Okla.**—Citizens have voted bonds for road improvements.

**Altoona, Pa.**—Taxpayers of Autes Township are urging construction of new State road.

**Butler, Pa.**—Council is considering paving of Lookout ave., South Side.

**Connellsville, Pa.**—Town Council has authorized advertisement for bids for laying stone and cement sidewalks, and repairing all where required.—Clair Stillwagon, President; A. O. Bixler, Clerk; J. B. Hogg, Borough Engineer.

**Danville, Pa.**—Montour County officials have been notified by State Highway Department that \$16,000 is available immediately for reconstruction of roads in Montour County; Department suggests reconstruction of roads in Valley Township.

**Dunmore, Pa.**—No contract was awarded for paving of one block on North Blakely st. McConville & Fitzpatrick being the only bidders and their bid being \$500 above the estimate of the borough engineers.

**Sunbury, Pa.**—Council has passed ordinance for paving of Second ave.

**Woonsocket, R. I.**—Board of Aldermen has appropriated \$2,800 to macadamize 2d st.

**Canton, S. D.**—Bids will be received by Good Roads Committee of Lincoln County until Sept. 20 for furnishing and delivering 800 cu. yds. of gravel on section line, between sections 15 and 22, Canton Township.—C. L. Wendt, Chairman.

**Roanoke, Va.**—Bids will be received until noon Sept. 25, for construction of a granolithic sidewalk on 4th st., S. E. between Tazewell and Bullitt aves.—W. B. Bates, City Engineer.

**Charleston, W. Va.**—Kanawha County is considering proposition to bond Charleston district for \$135,000, Union district for \$30,000, and Pocahontas district for \$15,000 for construction of permanent roads from this city to Lock Six and from this city to Sissonville.

**Appleton, Wis.**—Bids will be received by Board of Public Works until 2 P.M., Sept. 20, for paving portion of Prospect st.; bids will also be received until 2 P.M., Oct. 4, for paving with concrete portion of Market st.—E. L. Williamson, City Clerk.

**Prescott, Wis.**—Bids will be received until noon, Oct. 1, for grading Dakota st.—R. H. Price, City Clerk.

### BIDS RECEIVED

**Baltimore, Md.**—Thomas F. Mullan received contract for paving Garrett st., between Eutaw and Howard sts., with granite blocks at \$2,800.

**Atlantic City, N. J.**—Bryant Reilly has been awarded the contract for paving with Amesite the section of Ocean Boulevard between Absecon and Somers Point. B. F. Sweetson submitted a bid, declared informal, for \$195,224.

**South Canonsburg, Pa.**—Town Council opened bids for paving two streets from John McNary. Canonsburg; the Hallam Construction Co., Washington, and Maynard & Flynn, Pittsburgh; the bids were turned over to Borough Engineer J. M. Farmer for tabulation.

### SEWERAGE

**Attalla, Ala.**—Citizens are urging immediate installation of sewerage system.

**East San Jose, Cal.**—Citizens, for third time, will vote on installation of sewer system.

**Berwyn, Ill.**—Bids will be received by Board of Local Improvements until 8 P.M., Sept. 21, for constructing a system of

sewers; cost \$23,935.56.—Geo. H. Norton, Secretary.

**Joliet, Ill.**—Bids will be received by Board of Local Improvements until 10 A.M., Sept. 20, for constructing a sewer in Catalpa st.—Wm. S. Welch, Clerk.

**Bremen, Ind.**—Bids will be received by Town Board of Trustees until 8 P.M., Sept. 21, for the construction of a lateral sewer.—T. F. Knoblock, Town Clerk.

**Winchester, Ky.**—Citizens will vote in November on installation of sewer system.

**Baltimore, Md.**—Baltimore may have a complete health insuring sanitary system for \$14,000,000, in opinion of Chief Engineer Calvin W. Hendrick, of Sewerage Commission.

**Duluth, Minn.**—Board of Public Works will circulate petition for construction of storm sewer from Boulevard to bay.

**Camden, N. J.**—Council has passed ordinance authorizing construction of sewers along York, Morse and Florence sts.—I. V. Bradley, Clerk.

**Roosevelt, N. J.**—Borough Engineer will prepare report on subject of disposal of sewage.

**Newburgh, N. Y.**—Citizens are urging construction of sewer in Robinson ave.

**Schenectady, N. Y.**—Board of Contract and Supply has ordered bids advertised for storm water sewers in Congress st. and in 7th ave.—C. W. Trumbull, City Engineer.

**Akron, O.**—Sewer Committee and City Engineering Department will make inspection of the trunk line sewer which empties into Cuyahoga River near Lock 16 with view of putting through Council ordinance to extend sewer to city limits.

**Napoleon, O.**—Bids will be received by Village Council until noon, Sept. 17, for constructing a sanitary sewer on Perry st.—G. E. Rafferty, Village Clerk.

**Enid, Okla.**—All bids opened August 20 for constructing storm sewers in Cherokee and Elm aves. have been rejected; new bids will be received September 17; estimate for Cherokee ave. sewer is \$41,990, and for Elm ave. sewer \$27,328.—J. P. Rickard, City Engineer.

**Oklahoma City, Okla.**—Citizens have voted \$185,000 sewer bonds.

**Perry, Okla.**—City will construct sewage disposal plant costing about \$21,000.—F. W. Bobbitt, City Engineer.

**Chester, Pa.**—Sewer Department will retain Alexander Potter to make plans and estimates for sewerage system and sewage disposal plant.

**Connellsville, Pa.**—Town Council has directed Borough Engineer J. B. Hogg to prepare comprehensive sewer map and disposal plant to be filed with State Department of Health.

**Norristown, Pa.**—Bids will be received until 8 P.M., Sept. 28, for construction of an 8-in. vitrified pipe sanitary sewer and appurtenances on Cherry st. and Wilson alley.—S. C. Corson, Borough Engineer.

**York, Pa.**—New Board of Public Works has been appointed to spend several thousand dollars in putting in house laterals on certain streets. Councilmen Waxbers, Lindsay and Craver are members.

**Fort Worth, Tex.**—J. H. Clark and his associates, San Antonio, have presented to City Commission elaborate plan for establishment of sewerage plant below city on Trinity River to care for the sewage of the city.

**Roanoke, Va.**—Bids will be received until noon, Sept. 25, for construction of a

sewer so as to accommodate the properties abutting on four streets.—W. B. Bates, City Engineer.

**Niagara Falls, Ont., Can.**—Tenders are being called for 1,000 ft. of 9-in. sewer and 1,400 ft. of 18-in. sewer pipe.—J. C. Gardiner, City Engineer.

#### BIDS RECEIVED

**Cherokee, Ia.**—Fraser & Co., city, was the low bidder on 20,000 lin. ft. vitrified sewer pipe at the following prices: 6-in., \$1.29; 8-in., \$1.35; 10-in., \$1.50. The depth of trench varies from 6 to 20 feet, the material excavated clay gravel and loam and a little stone. Solid rock excavation is paid for at rate of \$5 per cu. yd.; sheathing left in, \$40 per M.; manholes, \$50. Total bid, \$33,436. Cook Construction Co. bid \$34,280. Wages of common laborers are \$2 and \$2.50.—Wm. Shardlow, City Engineer.

**Hominy, Okla.**—J. L. McFarland of Dewey has been awarded contract to install sewer and water systems for \$35,000.

**Houston, Tex.**—Following are details of lowest bid on sanitary sewer for the 1st and 6th Wards, according to City Engineer T. C. Tarver: Approximate quantities are as follows: 320 ft. of 24-in. vit. tile pipe, 5749 ft. of 15-in., 557 ft. of 12-in., 2,576 ft. of 8-in. The lowest bidder was John C. Underwood of this city, his tabulation being as follows. Prices bid include Y's, branches, detachable covers, etc.: All brick masonry in cement mortar, \$12.00. All iron casting, .06. 24-in. pipe built in manholes, 2.20. 15-in. pipe built in manholes, 1.00. 12-in. pipe built in manholes, .50. Concrete foundation per cu. yd., 10.80. Extra sewer excavation, cu. yd., .50.

Cut	8 Inch Pipe	12 Inch Pipe	15 Inch Pipe	24 Inch Pipe
0-6 feet	\$0.52	\$0.84	\$1.35	\$2.43
6-8 "	.59	.96	1.59	2.64
8-10 "	.65	1.08	1.74	2.80
10-12 "	.96	1.35	2.08	3.27
12-14 "	1.43	1.63	2.23	3.44
14-16 "	1.59	1.80	2.19*	3.64
16-18 "	1.76	1.95	2.54	3.77
18-20 "	1.92	2.11	2.70	4.00
20-22 "	2.28	2.26	2.85	4.20
22-24 "	2.43	2.43	3.05	4.47
24-26 "	2.76	2.96	3.26	4.92
26-28 "	2.91	3.09	3.69	5.10
28-30 "	3.09	3.27	3.86	5.28
30-32 "	3.28	3.75	4.15	5.50

\* Mistake of contractor.

#### MANHOLES AND FLUSH TANKS

Class "A"—0-6 ft.	\$145.00
6-8 ft.	159.00
8-10 ft.	171.00
Class "B"—0-6 ft.	177.00
6-8 ft.	197.00
8-10 ft.	217.00

#### REPAVING

Asphalt	\$2.40 per sq. yd.
Brick	2.30 per sq. yd.
Time	180 days

#### WATER SUPPLY

**Douglas, Ariz.**—Bids will be received until 1 P.M., Oct. 4, for sinking a 6-in. well, cased 150 ft. deep, on the Poor Farm.—G. J. McCabe, Chairman, Board of Supervisors.

**Lynn, Mass.**—Mayor Rich, with Committee on Water Supply and Lynn Water Board, will leave for Norwalk, Conn., where they will inspect system of slow sand filtration in operation there in connection with city's water supply, which is said to be an exact duplicate of the slow sand filtration proposed for Lynn.

**Winthrop, Mass.**—Town has appropriated \$40,000 for improvement of water supply.

**Fargo, N. D.**—Alderman Trebert has prepared two plans for extension of water mains in Seventh Ward.

**Columbus Barracks, O.**—Bids will be received until 10 A.M., Sept. 17, for relocating certain old hydrants and furnishing and setting four new ones.—Capt. H. J. Hirsch, Quartermaster.

**Lewisburg, O.**—John W. Hill & Son have been commissioned to make plans and superintend construction of water works which will be operated through a system of wells; cost \$25,000.

**Crescent, Okla.**—Citizens have voted \$20,000 water works bonds.

**Harrisburg, Pa.**—Water Department is making measurements for auxiliary reservoir in Reservoir Park, probably at Cherry Hill, for purpose of furnishing water to Eastmore.

**Harrisburg, Pa.**—Water Supply Commission of Pennsylvania has approved following applications for charters: North Annville Water Supply Co., for North Annville Township, Lebanon County; South Annville Water Supply Co., for South Annville Township, Lebanon County; North Cornwall Water Supply Co., for North Corn-

wall Township, Lebanon County; Gravel Hill Water Supply Co., for North Londonderry Township, Lebanon County.

**Sheshequin Water Power Co.**, for Sheshequin Township, Bradford County, and Wysox Water Power Co., for Wysox Township, Bradford County; Borough Water Power Co., for borough of Tonawanda, Bradford County; Tonawanda Water Power Co., for Tonawanda Township, Bradford County; North Tonawanda Water Power Co., for North Tonawanda Township, Bradford County; Ulster Water Power Co., for Ulster Township, Bradford County; Asylum Water Power Co., for Asylum Township, Bradford County.

**Spring City, Pa.**—Bids will be received by Board of Trustees of Eastern Pennsylvania State Institution for Feeble Minded and Epileptic until noon, Sept. 22, for the construction of a reservoir, excavation, grading and filling, furring brick and plastering at institution. P. H. Johnson, Land Title Bldg., Philadelphia, Engineer.

**Nashville, Tenn.**—Plans and specifications have been selected for laying water main and sewer pipes to Tennessee Industrial School; plans being used are known as sprinkling system, with improved septic tanks and contact and filter beds.

**Dallas, Tex.**—City Engineer J. M. Preston has estimated that 3½ miles of pipe will be necessary to connect new water system with reservoir at White Rock; plans are being prepared for pumping station.

**Waukesha, Wis.**—Bids will be received by Board of Water Commissioners until 2 p.m., Sept. 21, for furnishing approximately 8,500 ft. of cast iron pipe and all necessary fittings and special castings; also valves and valve boxes. Fred. Phelps, Secretary.

**Cheyenne, Wyo.**—Citizens have voted \$25,000 water bonds; water will be pumped six miles.

#### BIDS RECEIVED

**Hominy, Okla.**—Council has entered into a contract with J. L. McFarland of Dewey to install water and sewer systems at a cost of \$35,000.

#### LIGHTING AND POWER

**Nashville, Ark.**—Leo Loeb and George Schmial, Hot Springs, are considering installation of electric light and power plant.

**Palo Alto, Cal.**—L. H. Newbert, Redwood City, District Manager of U. S. Gas & Electric Co., has made proposition to supply this city with current.

**Marion, Kan.**—Bids will be received about Sept. 19 for an electric light plant.—Burns & McDonnell, Kansas City, Mo., Engineers.

**Lawrence, Mass.**—Hampton Beach Improvement Society has appointed J. F. James and Secretary Colley to confer with Amesbury Gas Co. concerning advisability of making gas connections at beach.

**Brainerd, Minn.**—Frank Farnum, St. Paul, has presented request to Council for franchise for a gas plant in this city.

**Eveleth, Minn.**—City Clerk has been instructed to advertise for bids for all the city lighting for next five years.

**Crescent, Okla.**—Citizens have voted \$10,000 lighting bonds.

**Vancouver Barracks, Wash.**—Bids will be received by Constructing Quartermaster until Sept. 28 for resetting of a pole line carrying electric wires and primary meters.

#### FIRE EQUIPMENT

**Los Angeles, Cal.**—Chief Lips has recommended purchase of two automobile chemical and hose wagons and 600 ft. of 2½-in. hose.

**Centerville, Conn.**—Architect Frank Elwood Brown's plans have been accepted by Centerville firemen for their new department house.

**Washington, D. C.**—Bids will be received Sept. 28, 2 p.m., for furnishing District during fiscal year ending June 30, 1910, with 15,000 ft. 2½-in. cotton lined hose.—H. B. F. Macfarland, President Board of District Commissioners.

**Augusta, Ga.**—Council has authorized Fire Committee to advertise for bids for erection of new fire headquarters and same will be done at once.

**Chicago Heights, Ill.**—Bids will be received Sept. 20, 8 p.m., for construction of a 2-story fire house.—W. E. Lennertz, City Clerk.

**Frostburg, Md.**—East End residents are urging erection of fire house and the maintaining of a reel and hose.

**Rockaway Beach, L. I., N. Y.**—Citizens have asked for erection and equipment of hook and ladder station.

**Webster, N. Y.**—City will build fire station.

**Ardmore, Okla.**—Fire Department is considering purchase of another automobile engine.

**Chester, Pa.**—Commissioners of Upper Darby Township will install fire alarm system.

#### ELECTRIC RAILWAYS

**Cleveland, O.**—People's Street Railway Co. has been incorporated by T. J. Dolan, Mills Dodd, Hugh McConaghy, Robert Johnstone and F. E. Cottler; capital, \$10,000.

**Everett, Pa.**—Application will be made by M. J. Murphy, H. D. Tate, Geo. W. Rook, Jno. F. Fay, M. H. Sheats and I. Y. Daly for charter of intended corporation, to be called the Bedford, Fulton & Franklin St. Railway Co.—H. D. Tate, Bedford, Solicitor.

**Fairmont, W. Va.**—Directors of Fairmont & Northern Traction Co. have completed their organization; company will start construction of electric railroad from Fairmont to Fairview within a short time.—S. L. Watson, President.

#### BRIDGES

**Duluth, Minn.**—Conference Committee will consider appropriation for bridge over Fischer's Creek, on Superior st.

**Shiprock, N. M.**—Bids will be received by Commissioner of Indian Affairs, Department of the Interior, Washington, D. C., Oct. 15, 2 p.m., for construction of a steel highway bridge across the San Juan river, San Juan Reservation.—Wm. T. Shelton, Superintendent.

**Toledo, O.**—Council has passed third reading ordinance to issue \$300,000 additional bonds for construction of Cherry st. straight bridge.

**Ardmore, Okla.**—Bids will be received Sept. 18, noon, for erection of 86 steel bridges in Carter County.—R. F. Scivalley, Chairman, Board of County Commissioners.

**Bristow, Okla.**—Creek County will vote October 26 on \$202,000 bonds for building bridges.

**York, Pa.**—Bids will be received by York County Commissioners Sept. 21, 10 a.m., for repairing and rebuilding the Beaver st. bridge.—C. B. King, Clerk.

**Salt Lake City, Utah.**—Bids will be received by Board of Public Works Sept. 17, 8 p.m., for constructing N. Temple street aqueduct.—L. C. Kelsey, City Engineer.

**Montreal, Que., Can.**—Engineers will soon select site for a new bridge between the Island of Montreal and the south shore.

#### BIDS RECEIVED

**Jacksonville, Fla.**—The Board of County Commissioners has awarded contracts as follows: For building a concrete bridge over Julington Creek, to Canton Bridge Co. of Canton, O., for \$3,510; for building draw in bridge over Pablo Creek to Converse Bridge Co. of Chattanooga, Tenn., for \$7,795.—P. D. Cassidy, Clerk.

**Council Bluffs, Ia.**—Bids for construction of concrete bridges at Benton st. and 8th st. have been opened by Council, and after being read by Deputy City Clerk Mortenson were referred to the City Engineer for tabulation. The bidders and the amount of their bids, omitting conditional details, were as follows: E. A. Wickham—Benton st., \$11,885; 8th st., \$7,492. N. M. Stark—Benton st., \$8,000; 8th st., \$15,000. 2 Miracle Concrete Corporation—Benton st., \$6,783.50; 8th st., \$8,463.80; both bridges, \$14,139.25. James Saguin—Benton st., \$5,500. Kimballton Construction Co.—Benton st., \$8,460.28. The low figures, on the face of the bids, would be arrived at by taking the price given by E. A. Wickham on the 8th st. bridge, \$7,492, and the price of James Saguin on the Benton st. bridge, \$5,500, making a total of \$12,992.

**Atlantic City, N. J.**—Three bids for furnishing lumber for repairs to bridges across the Thoroughfare along the Meadow Boulevard were opened by the Board of Freeholders as follows: Atlantic City Lumber Co., \$35 per 1,000 ft.; Lake & Risley, \$36 per 1,000 ft.; and Somers Lumber Co., \$38 per 1,000 ft.

#### MISCELLANEOUS

**Camden, Ark.**—Council has ordered immediate numbering of all houses not provided with proper numbers.

**Long Beach, Cal.**—Citizens have voted \$245,000 bonds for purchase of municipal water frontage and building of docks.

**Oakland, Cal.**—City is considering purchase of block of land near 13th and Oak sts. for park purposes.

**Washington, D. C.**—To investigate methods of disposing of garbage in some of larger cities of the country, Commissioner West and Superintendent Wood, of Street Cleaning Department, are contemplating visit to Detroit, Cleveland, Cincinnati, Buffalo and Pittsburgh.

**Peoria, Ill.**—Mayor Woodruff and other officials will visit Joliet to inspect incinerating process of disposing of garbage.

**Baltimore, Md.**—Councilman Hoffman will introduce ordinance in Council for erection of \$40,000 public bath near Cross st.; \$30,000 will be spent on combined public